WEEK

BUSINESS WES

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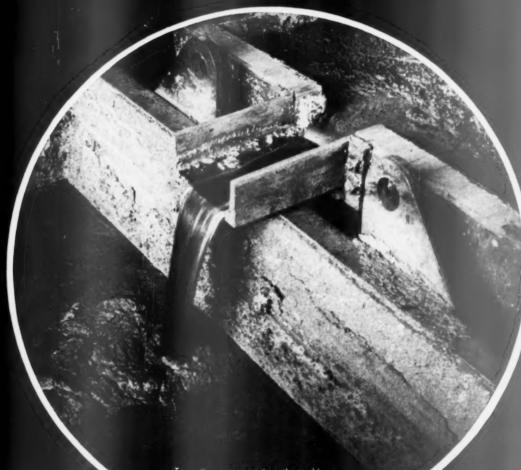
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START. OF WAR



Texas tin - more precious than rubies.

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PUBLISHED BY THE McCRAW-HILL PUBLISHING COMPA

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Inside Story of a Man-Sized Engine

ITS LIFE DEPENDS ON THE RIGHT OIL! TO HELP MAINTAIN

CAPACITY PRODUCTION

CALL IN

SOCONY-VACUUM



I SN'T that a whopper? It is a large Diesel engine and you're looking at the very inside of it.

Just imagine how heat and pressure build up when that giant starts spinning! The only thing that stands between it and self-destruction is a lubricating

Those red lines in the picture are oil lines. That oil must prevent destructive metal-to-metal contacts, and help control the piston head temperatures, too.

Ordinary oils can't stand the gaff. They break down-form deposits-and then operating trouble begins.

But you needn't worry if a Gargoyle Oil is on the job!

The makers of these oils successfully lubricated Dr. Diesel's first engine.

Their "know-how" from 77 years' experience in correct lubrication is, today, helping management keep machinery of all types hard at work.

SOCONY-VACUUM OIL CO., INC .- Standard Oil of New York Div. • White Star Div. Lubrite Div. • Chicago Div. • White Eagle Div. • Wadhams Div. • Southeastern Div. (Baltimore) · Magnolia Petroleum Company General Petroleum Corp. of California.



Tires Made with B. F. Goodrich Synthetic Now Rolling on Nation's Buses

A typical example of B. F. Goodrich leadership in tires

You've read plenty about synthetic rubber, about the tires that are going to be made with synthetics. But did you know that right now many a bus in Chicago, Boston, Cleveland and New York is trying out tires using synthetic rubber made by B. F. Goodrich?

One of these tires is shown in the picture—an Ameripol Silvertown being inspected after more than 8,000 miles on the wheel.

Varying amounts of synthetic rubber have been used in making these new Ameripol bus tires—but some of them now actually in service contain over 99% synthetic rubber.

B. F. Goodrich was first to offer for sale tires made with synthetic rubber for

passenger cars—that was in 1940! And now B. F. Goodrich pioneers with Ameripol Silvertowns for buses. Production is not unlimited. The rubber

shortage is still acute. But already synthetic tires made by B. F. Goodrich are helping in the war effort.

The Army and Navy get first call on every ounce of synthetic rubber we make. Right now there is little, if any, for general civilian use. There will be some for essential transportation.

And when synthetic rubber is plentiful, come to B.F.Goodrich for your tires. You can be sure that B. F. Goodrich will be first just as B. F. Goodrich was first to offer American car owners tires made with synthetic rubber. Remember, nobody makes as good a cake as the cook who discovers the recipe!





NOTHER American fighting plane has been put in the sky -and American industrial workers, practically anywhere, may see it and take pride in the fact that they helped put it there. For a plane's first flight really starts from a lot of places—the coal miner has supplied the fuel for other industries which produce aircraft materials and parts, other miners and quarrymen have made different



As mechanical rubber products come into the production picture, all down the line, so does the Industrial Distributor . . . with his ex-perience and facilities for speed and efficiency on industry's equip-ment needs. The Republic Distributor Emblem is your assurance of completely qualified service on me-chanical rubber as well as other

ores and materials available . . . the personnel of metal producing plants have doubled and redoubled their efforts to provide enough aluminum, steel, copper, etc. for the vast number of planes we need . . . men and women in widely divergent manufacturing plants the country over have turned to the job of making airplane sections or parts. All these and many more, in addition to those who are specifically classified as aircraft workers, have had a share in hatching this bird of war.

Better than any others, these people who are on the actual production lines know the far-reaching importance of mechanical rubber products to all the industrial processes which a finished airplane represents. Either in their own hands or all around them, no matter what their field, they see industrial rubber hose and belting serving vital operating functions. Making sure that war industry has enough of the right kind of rubber equipment is Republic's assignment today. REPUBLIC RUBBER DIVISION OF LEE RUBBER AND TIRE CORP., YOUNGSTOWN, OHIO.

Get your SCRAP into the fight



Help to conserve the nation's rubber. See that your plant has a copy of Republic's "Handbook of Care in the Installation and Use of Me-chanical Rubber Equipment." Write.

LEE RUBBER & TIRE CORPORATION

BUSINESS WEEK

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WASHINGTON BULLETIN

WHAT THE WASHINGTON NEWS MEANS TO MANAGEMENT

Farming Faces Industrialization

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Now the war is hitting agriculture the same way it hit business. The little farmer is going to find himself in the same spot as the little business man did when the war manufacturing job had to be thrown to the big business man. The strain imposed upon agriculture by the effort to increase a little—even to maintain—1942's high farm production levels may shape the pattern of the nation's farm economy for years to come.

Wartime demands for high production have confronted Wickard with the long latent industrialization of the farm—a development inhibited for 20 years by political manipulation aimed at protecting a high-cost farm economy.

Now underway on the farm is a telescoped version of the rise of modern industry—growth of bigger units, mechanization, cartelization, labor-employee disputes, straight production for profit. Note, for instance, Wickard's victory over the War Production Board in his long fight for more metal for farm machinery.

No Political Protection

Despite appearances, the little farmer can't depend on a Congress full of farmers to insure him a place in the wartimefarm production job. Prospect for many small farmers is wages on a big farm.

small farmers is wages on a big farm.

The farm bloc congressman weeps for the little farmer but is not afraid of his vote. He knows that in the South the little farmer can't pay his poll tax and hence can't vote. He knows that in the rest of the country the major farm organizations have the whole farm vote in their pocket.

Farm Security Loses Out

The plight of the little farmer was spotlighted when Secretary of Agriculture Wickard threw the Farm Security Administration out of the farm production organization saddle. Since the resignation of Herbert W. Parisius, former FSA man, as Farm Production Administration head, the groups in Agriculture—the Agricultural Adjustment Agency and the Farm Credit Administration—that see farming as a business rather than a way of life are running the show.

Under the spur of war, the industrial revolution in agriculture has overtaken the FSA, which was created by the New Deal to keep the marginal farm alive as an independent unit.

Until wiped out, the short-lived Parisius regime intended to rely greatly on

stepped-up small farm production to meet war goals—using such devices as increased FSA social aids.

Instigated by the major farm organizations, Congress is getting ready to cut the heart out of FSA appropriations. Unless prodded by the White House, Wickard will leave FSA to its congressional fate.

Fight to Hold Down Prices

The business man-farmer's recipe for increased production is higher prices. Wickard knows they can enforce the demand, realizes that he'll have to go along. At the same time, with the aid of Byrnes and Brown, he will hold increases to as little as seems practical.

Momentarily, at least, they are aided by the rebirth, for the first time in two years, of internal dissension among the farm lobbyists. Byrnes set the boys to fighting by splitting off the livestock interests with a ceiling on corn (BW-Jan.16'43,p7).

Wickard is helping the split along and building his own fences by quiet backroom meetings with certain of the farm men. Division is already showing itself over parity revision, with the dairy interests plugging for the Pace bill to include all farm labor in parity, while the Grange and Farm Bureau want to hold out for a complete rewrite of the parity law.

Byrnes, meanwhile, is renewing his offer to settle for inclusion of hired labor only, which would raise parity less than counting theoretical wages for the farmer and his family as specified in the Pace bill.

• Staving Off Demands—Despite the opposition of the big-farm groups, which would prefer a price increase all along the line, Wickard has been able to sat-

Casablanca-Plan for War, Not Peace

Casablanca has prepared the way for the next decisive campaign in the war. But plans for the peace must wait for the next great conference in which Russia—and possibly China—will participate.

sibly China-will participate.

That is the net of Washington's reactions to the news, released at last, of the historic conference in North Africa between President Roosevelt and Prime Minister Churchill. Stripping away the dramatic in a somewhat disappointing search for tangible accomplishment, Washington analysts were able to distill these significant facts:

(1) The meeting was primarily a military conference to plan the concerted Anglo-American attacks on Germany which, in view of the near climax of the North African campaign and the continuing spectacular Soviet victories, have revived hopes that Hitlerism, despite the very real Nazi submarine threat, can be crushed in another year of rapidly intensified attacks from the south and west to supplement Russia's drive from the east.

(2) The authority for the control of the various sections of North Africa (a model for other far more complex regions to be occupied during the next twelve months) was specifically assigned. So, also, was the responsibility for the expected assaults on various continental fronts.

(3) Moscow, and other skeptics, were assured publicly that, despite recent questionable dealings with Vichyites, both Washington and London intend to fight until the Axis surrenders unconditionally.

(4) Stalin's pointed refusal to attend the meeting, italicized by President Roosevelt when he revealed that he had offered to go as far as Cairo if Stalin would join in the conferences, supports recent rumors of strained relations between the Russians and the Anglo-American bloc. Washington, keenly sensitive to the problems of negotiating a peace settlement into which a courageously victorious Russia will strongly insinuate its peculiar Communist theories, reads into the Stalin rebuff a determination on the part of Moscow to hold aloof now from any entanglement with Anglo-American peace policies. Without Soviet participation, no fundamental peace plans could be formulated at Casablanca.

The fact that Chiang Kai-shek was not invited to participate in the discussions at Casablanca supports the contention that the negotiations were confined to the war against the Berlin end of the Axis; that London, Washington, and Moscow are agreed that present supplies of equipment and ships are inadequate to undertake a major Far Eastern offensive until Germany has capitulated.



We owe so much to Bud Jones

You know Bud Jones. He's the young lad who worked in your office, the boy who lived next door, or the youngster who used to wash your car on Saturday afternoons. In a few minutes he'll be lining his gun sights on a Nazi bomber.

Bud would probably blush all over and feel pretty uncomfortable if you called him a "hero." He'd say, "Skip it!"

Only we can't "skip it," Bud. Everything we are doing at home seems so small in contrast to what you are doing. But we have put your picture and story, Bud, in all of our plants so that the men and

women who make Ethyl fluid—about 4000 of them—may remind themselves that their jobs are war jobs and that "every drop of Ethyl counts."

It is a privilege for us to put everything we have in resources, experience and skill into our effort to help you.



ETHYL CORPORATION

Chrysler Building, New York City

Manufacturer of Ethyl fluid used by oil companies to improve the antiknock quality of aviation and motor gasoline

WASHINGTON BULLETIN (Continued)

isfy the situation for the time by extending the incentive-subsidy principle—granting extra pay for production beyond 90% of quota—to six more crops.

Production Pressures Ease

With the Roosevelt-Churchill decisions renewing speculation about the end of the war, business men who watch Washington closely are beginning to realize that the war will end, in effect, at different times for different industries.

Already it might be said that the war is near its end for the capital goods industries. Thus construction began its return to peace-time tempos last September, when the level of construction activity started to fall rapidly from the \$1,600,000,000 August peak—a peak nearly three times the highest pre-Pearl Harbor level.

Machine tool manufacture is now in process of turning the corner (which has been predicted before but looks like the real thing this time). The industry's last big job, the expansion of the aircraft program, is about over the production

Prospects for particular manufacturing industries are less predictable, depend on the varying strategies of war. The cutdown of the tank program is one example. For another, it's probably safe to assume that as the United Nations establish firm dominance of the air, the stress on antiaircraft weapons will diminish.

• Reconversion Problem—For a while, manufacturers of war goods that are no longer needed will easily switch to something else. But later in the year, such firms may find their personal armistice disastrous.

An Ease-up on Builders

Private builders are this week's beneficiaries of Washington's current tendency to go easier, as it were, on civilians. They have complained that last October's housing standards, setting maximum standards for priority-aided housing, force them to build houses so inferior they have no market value (BW-Jan.23'43,p16).

Revised standards increase permitted floor area by 10% to 15%, allow use of softwood floors, and, for three months, permit use of wood frame construction in New Hampshire, Vermont, Wisconsin, Iowa, and the Dakotas, where builders previously were limited to masonry; the restriction still stands in 17 other

Similarly, a tight supply of plumbing fixtures is being eased by permitting manufacturers to use until mid-March materials frozen last June.

Jeffers Tangles with Nelson

Rubber Boss Jeffers's relations with WPB Boss Nelson were so strained at midweek that nothing short of a miracle, it seemed, could prevent Jeffers from bouncing back to Omaha. Jeffers's approach to his job has been

Jeffers's approach to his job has been short of realism in at least two particulars: He has clung to a literal interpretation of the President's designation of rubber as the most important war problem, which was part of the sales talk that induced Jeffers to take the job last fall, and he acted too literally on the Baruch report's advice to "bull through" the synthetic building program (BW-Jan.23'43,p17).

• Definitions—In Washington, as many

• Definitions—In Washington, as many business executives have learned through bitter experience, a boss isn't always a boss; there are times when he's got to be a diplomat.

Too Much Alcohol Now

Upshot of the lag in the synthetic rubber program may be more whisky. With whisky being rationed in many states as a result of the conversion of distillers to alcohol production last October, alcohol now is so plentiful—at least, for the present—that the storage problem is acute. The synthetic rubber plants won't soak up alcohol in important volume until summer.

The oil industry is complaining that tankage and tank cars required to handle the steadily increasing alcohol stockpile would be better utilized in essential gasoline and fuel oil distribution. And distillers would welcome a "vacation" to make whisky until alcohol consumption catches up to supply.

Another Pipeline

Some relief for the oil-starved east but not much—is due next September with the scheduled completion of the new 20-inch gasoline pipeline just approved by WPB.

The Army and Navy will get all that the pipe delivers for transatlantic shipment, a much shorter haul than from the Gulf, and that was a chief factor in WPB's favorable action on the project. Because of military needs, the line won't guarantee "pleasure driving," though it will ease the supply situation.

will ease the supply situation.

The line will deliver 235,000 bbl. daily of gasoline, kerosene or other light products from the Houston-Beaumont area of Texas to Seymour, Ind., where it will be transferred to tank cars, shortening the rail haul by some 800 miles. Net increase in tank car deliveries to the Atlantic seaboard will be around 110,000 bbl. daily.

Next leg-this spring the Petroleum Administration will study extending the 20-inch line from Seymour to the New York area, prepare proposals for WPB's consideration.

Nugent Plan's New Snag

The big and powerful National Automobile Dealers Assn. has just about killed the Nugent (instalment selling-inreverse) Plan (BW-Jan.16'43,p16). Fortified with special analyses prepared by the Brookings Institution, N.A.D.A. heard Nugent tell his story, then voted down his plan on grounds that it would (1) extend wartime controls over postwar economy, and (2) make for greater bureaucracy.

Nugent's fix, however, isn't stopping a rash of private plans, all based on selling merchandise now for postwar delivery. Notable is the Hartford Electric Light Co.'s sale of regular war bonds, accompanied by a priority for purchase of postwar goods.

• Every Man's Plan-Simplest of all: Norge's give-away folder called "War Bond Budget Portfolio," equipped with pockets labeled "New Car or Plane," "Vacation or Travel," etc. Idea is that you buy bonds and operate your own private "Nugent Plan."

CMP Paperwork Due

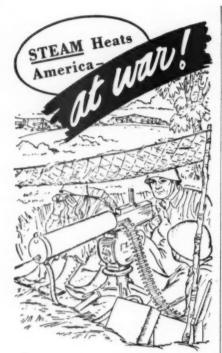
The basic Controlled Materials Plan instruction—to do no paperwork until specifically ordered—no longer holds for Class B producers. If your product is on the official Class B list, you should obtain form CMP-4B and its corresponding instruction sheet immediately. This is an application for allotment number.

On the basis of your order backlog, you will have to prepare a production schedule and a list of the controlled materials you and your subcontractors will need. Try to submit the application to your WPB industry division before Feb. 9. If not, you can still get materials under the Production Requirements Plan, but it's easier and quicker under CMP

Woods Plant Not Returned

Disregard press reports that the War Dept. has returned to the S. A. Woods Machine Co. of Boston the plant that was seized last August because of the company's refusal to obey a National War Labor Board order directing it to sign a maintenance of membership agreement with the C.I.O.'s united electrical workers.

The owners have been paid \$889,743 for inventory obtained by the Army by condemnation and for the use of the



A MIGHTY flood of "Chicago pianos"...

Fire-power to engulf the Axis . . .

Machine guns by the million . . .

That is America's promise to the Victory Program—and America is going to beat that promise.

The time-table of war construction has been reviewed in order to get essential new plants into production without delay.

Heating problems presented by plant conversion and by the new building program call for a proven method of heat distribution.

When steam is selected as the heating medium, all of the experimenting has been done. Steam harnessed and brought under control with Webster Systems of Steam Heating has proved its ability to heat every section of a building to the desired temperature at minimum cost.

Today, we are engaged in direct war work, but manufacturing facilities are still available to supply Webster Steam Heating Equipment for buildings serving the war effort.

Essential repairs for Webster Systems are available on A-10 priority, under W.P.B. Emergency Repair Order P-84. Orders should be limited to actual needs.

Warren Webster & Company, Camden, N. J. Representatives in 60 principal Cities



WASHINGTON BULLETIN (Continued)

plant until June 30, 1945. The plant continues to be operated for the Army by the Murray Co. of Dallas, Tex., which took over operation from the Boston district office of the War Dept. last October and signed the contract with the union (BW-Jan.2'43,p17).

Navy Flags Down CAB

Weeks ago the Civil Aeronautics Board called for bids on unspecified routes out of Miami covering the Caribbean area to expedite strategic war personnel and supplies and supplement hard-pressed surface shipping. CAB qualified seven applicants and was about to issue operating certificates. Now the Navy is holding up the whole project for "study."

Either the Army or the Navy told CAB to initiate the move in the first place. Officials won't say which. If it was the Army, a tug-of-war between the services is on again. If it was the Navy, the admirals either don't want civilians flying around Panama, or are thinking of incorporating the project with the Navy Air Transport Service.

• International Angles—Another point to be noticed is that one of the bidders is British West Indian Airways; England and the United States are getting set for the scuffle over world air transport.

Angling for World's Airways

When members of Parliament warned Britain the other day to prepare against American domination of the world air system, Washington was caught flatfooted—without a foreign aviation policy 16 years after Pan American Airways was organized. The Administration quickly formed a five-department committee to write a policy as a basis on which to deal with the British and to participate in the work of an international air commission that will be part of the peace machinery.

Main questions before the committee: Shall we advocate freedom of the world air space for all, or sovereignty of each country in its overlying air? If sovereignty is established, shall the nations continue "trading" air line rights, or frame some new system?

It's a hard problem, involving tariffs and all the phases of international relations. U. S. has the upper hand, with nearly all the oversea airlines and far more transport equipment than any other country.

Double Blow at Ruml Plan

Debate over pay-as-you-go taxation has produced something new in sophisticated argument. At first, opponents of the Ruml plan (BW-Jan.16'43,p19) attacked it on the grounds that the I reasury would lose a year's tax revenue. Now, without backing down on that point, they contend that much of the popular support of the plan is based on the mistaken idea that it involves a moratorium on taxes.

Backers of pay-as-you-go were encouraged to see the opposition getting tangled in its own arithmetic, but they hurried to declare that, Ruml plan or no Ruml plan, taxpayers next year will have to fork over the biggest payments in history. The last thing they want is to have pay-as-you-go tagged "don't-pay-at-all."

Rickenbacker's Eclipse

Capt. Eddie Rickenbacker has disappeared from the scene almost as miraculously as he appeared. A canvass of the Office of War Information, War Dept., WPB's War Production Drive headquarters, and other labor morale-building agencies discloses no plans to feature him further on the air or in personal appearances.

The Pacific hero will be ignored as much as possible because of his blunt remarks on labor's performance and his suggestions for labor legislation. Reaction of C.I.O.'s Phil Murray and other unionists made it obvious that Rickenbacker was a hot potato.

Asphalt Order's Threat

Petroleum Administrator for War Ickes's latest oil allocation order puts a noose around the necks of linoleum and roofing manufacturers. A little emphasized provision of the order, prohibiting movement or production of liquid asphalt in the 17-state east coastal region, threatens shutdowns in the hard-surface floor covering industry, puts a big crimp in asphalt roofing.

As written, the order expires Apr. 1, but neither the linoleum nor the roofing people are believed to have more than two or three weeks' supply of asphalt on hand.

Capital Gains (and Losses)

Farm bloc congressmen ascribe propaganda motives to the Office of War Information announcement that the ban on pleasure driving promises plenty of gas and rubber for the farmer.

R. J. Reynolds Tobacco Co. is supplying Camels free to the merchant marine. The company is allowed to advertise that fact but is not permitted even to hint that seamen smoke Camels exclusively.

—Business Week's Washington Bureau

FIGURES OF THE WEEK

		\$ Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
THE INDEX (see chart below	v)	*192.7	†193.6	191.8	185.1	169.5
PRODUCTION						
Steel Ingot Operations (% of capacity).		98.6	99.	98.2	96.3	94.6
Production of Automobiles and Trucks		18,420	18,380	14,505	18,260	79,930
Engineering Const. Awards (Eng. News-F		\$9,451	\$11,359	\$12,295	\$40,988	\$23,906
Electric Power Output (million kilowatt-	hours)	3,974	3,952	3,656	3,626	3,440
Crude Oil (daily average, 1,000 bbls.)		3,849	3,850	3,881	3,691	4,311
Bituminous Coal (daily average, 1,000 to	ons)	1,917	†1,850	1,913	1,850	1,910
TRADE						
Miscellaneous and L.C.L. Carloadings (d		75	71	74	79	84
All Other Carloadings (daily average, 1,00		51	48	49	64	51
Money in Circulation (Wednesday series,		\$15,354	\$15,322	\$15,329	\$12,546	\$11,077
Department Store Sales (change from same		+1%	+6%	+10%	+5%	+45%
Business Failures (Dun & Bradstreet, nur	nber)	114	96	81	190	241
PRICES (Average for the week)						
Spot Commodity Index (Moody's, Dec.	31, 1931 = 100)	244.6	243.9	239.4	230.6	225.9
Industrial Raw Materials (U. S. Bureau of	Labor Statistics, Aug., 1939 = 100)	157.3	157.1	156.4	154.2	153.2
Domestic Farm Products (U. S. Bureau of	Labor Statistics, Aug., 1939 = 100)	200.8	199.0	196.0	179.9	178.
Finished Steel Composite (Steel, ton)		\$56.73	\$56.73	\$56.73	\$56.73	\$56.7
\$Scrap Steel Composite (Iron Age, ton)		\$19.17	\$19.17	\$19.17	\$19.17	\$19.1
Copper (electrolytic, Connecticut Valley,	lb.)	12.000€	12.000€	12.000€	12.000€	12.000
Wheat (No. 2, hard winter, Kansas City,	bu.)	\$1.37	\$1.36	\$1.32	\$1.07	\$1.20
Sugar (raw, delivered New York, lb.)		3.74€	3.74e	3.74€	3.74e	3.74
Cotton (middling, ten designated markets		20.57€	20.43€	19.94¢	18.96¢	19.78
Wool Tops (New York, lb.)		\$1.220	\$1.201	\$1.210	\$1.243	\$1.279
Rubber (ribbed smoked sheets, New York	, lb.)	22.50¢	22.50∉	22.50€	22.50€	22.50
FINANCE						
90 Stocks, Price Index (Standard & Poor	's Corp.)	81.5	79.9	77.1	68.3	70.7
Medium Grade Corporate Bond Yield (3)	Baa issues, Moody's)	4.12%	4.15%	4.26%	4.29%	4.28%
High Grade Corporate Bond Yield (30 Az	a issues, Moody's)	2.78%	2.79%	2.81%	2.82%	2.84%
U. S. Bond Yield (average of all taxable	issues due or callable after twelve years)	2.32%	2.32%	2.36%	2.34%	2.37%
U. S. Treasury 3-to-5-year Note Yield (ta		1.27%	1.30%	1.39%	1.21%	0.94%
Call Loans Renewal Rate, N. Y. Stock E	xchange (daily average)	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6-months,	N. Y. City (prevailing rate)	1-1%	1-1%	1-1%	1-1%	1%
ANKING (Millions of dollars)						
Demand Deposits Adjusted, reporting me	ember banks	29,472	28,964	28,504	26,313	24,426
Total Loans and Investments, reporting in	nember banks	41,361	41,239	40,457	33,396	30,211
Commercial and Agricultural Loans, repor	ting member banks	5,956	5,975	6,165	6,430	6,721
Securities Loans, reporting member bank	S	919	964	1,508	1,034	850
U. S. Gov't and Gov't Guaranteed Obliga	itions Held, reporting member banks	28,347	28,142	26,510	19,218	15,339
Other Securities Held, reporting member	banks	3,292	3,286	3,264	3,414	3,673
Excess Reserves, all member banks (Wed	nesday series)	2,000	2,150	2,192	2,296	3,584
Total Federal Reserve Credit Outstanding		6,195	6,274	6,292	3,196	2,383
Preliminary, week ended Jan. 23.	† Revised.					
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^{*} Preliminary, week ended Jan. 23. ‡ Ceiling fixed by government.

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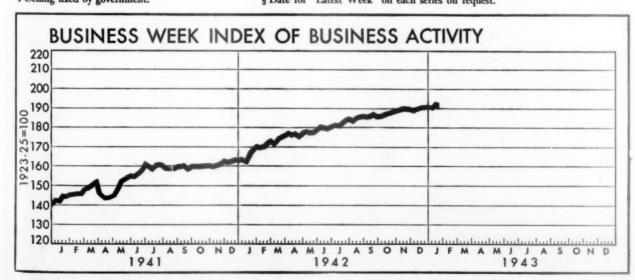
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[§] Date for "Latest Week" on each series on request.





Telephone wire coming up

Here's a bomber-gunner hurrying to load his 50-calibre gun. . . .

In peace, a lot of that copper would have gone into new telephone lines. Now it's needed for shooting and winning the war.

That's why we can't build new lines right now. That's why we're saying —"Please don't place Long Distance calls to war-busy centers unless it's absolutely necessary."

Thanks for all your help and we hope you will keep remembering.

BELL TELEPHONE SYSTEM

WAR CALLS
COME FIRST



THE OUTLOOK

Casablanca Spells Pressure

Roosevelt and Churchill clearly intend to drive harder on Nazis now they are faltering, at home and at front; corollary is intensified industrial effort here.

Casablanca conferences overshadowed

domestic news this week (page 5).
Whatever the specific secret military decisions, the economic dynamics underlying them were peculiarly clear to business. The Germans are on the run and the allied job is to keep them there -in order to hasten the progressive deterioration of the German economy.

Progress, Step by Step

The five-year old German war machine has drained its capital equipment. The three-year old blockade has exhausted stocks of critical materials. The 20-month old Russian war has cut heavily into limited military manpower. Year-old allied bombings have disrupted transport. North Africa forced sudden new building of fortifications.

All these have required a dangerous paring of civilian supplies and mobilization of European labor and material resources to the maximum. The whole fabric of Nazi power-front-line effectives, war production, civilian staminais being steadily sapped. Now strategic Russian successes cause Goebbels to talk of more cuts for civilians, new levies of troops, further diversion of resources to bolster the fronts.

Keeping up the Pressure

The Nazis must not be permitted the chance to halt this economic spiral, to stabilize their war effort. Despite the U-boats, pressure must be stepped up. If it can be, the European Axis will crumble. The Roosevelt-Churchill meeting therefore raises anew the possibility of an early end to the war. Conceivably, the tottering Nazi structure can be felled and Allied resources mobilized for a successful thrust into Tokyo in 15 to 18 months.

But, that's the best to be expected. Equally possible is that it will take twice that time. And, even to win in three years, American efforts must click on all cylinders. The program is to boost plane output 100%, cargo ships 50%, escort vessels astoundingly, and synthetic rubber and high-octane gas from scratch to huge industries between now and December.

The big bottleneck, which already is forcing us to cut and trim, is in components, industrial equipment (BW-Jan.23'43,p15;Jan.16'43,p13). Press re-

ports are that the War Production Board now will seek to break that bottleneck at least partially by "rationaliza-tion" of production, in order to speed and increase output of the critical parts.

Rationalized Output

Simplification, standardization, and concentration will be the watchwords of the new efficiency move. This week's order cutting the number of certain valve types from over 4,000 to 2,500 (page 60) is symptomatic. But closer to the heart of rationalization was last summer's WPB order on aircraft control and pulley bearings, which divided up production among manufacturers, limiting each producer to output of certain types and sizes of these bearings and prohibiting acceptance of orders for those allocated to other producers.

The obvious motivation for this is

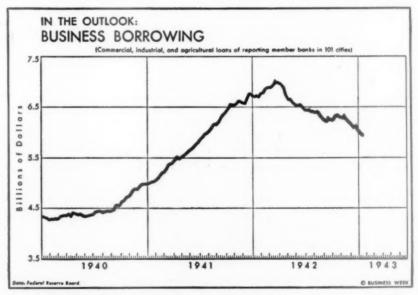
the fact that mass production of a few products is inestimably more efficient than odd-lot production of many. Steps in recent weeks to standardize types of builders' hardware and plumbing supplies might possibly release facilities for conversion to the industrial equipment so sorely needed-boilers, gages, heat exchangers, etc.

Transportation Aided

Rationalization is similarly being speeded in railway transport. The Office of Defense Transportation's 1942 order setting minimum tonnages for loading less-than-carlot freight has resulted in recent average loads of double those prevailing in 1941, theoretically freeing 85,000 cars per week.

The ODT's further order requiring maximum loading of cars carrying all other freight, instituted three months ago, is freeing increasing numbers of other cars-perhaps another 85,000, when fully effective at peak seasons. And, incidentally, whereas the l.c.l. edict affected boxcars, this maximum load order is partly easing the situation in flat and gondola cars, the supply of which is much tighter.

Of course, actual savings will not



The decline in business loans of reporting member banks has accelerated in the past two months. This reflects the continued predominance since last March of the deflationary liquidation of wholesalers' and retailers' inventories and of short-term consumer credit. Meanwhile, loans to manufacturers, especially in war work, have been rising. Both tendencies will continue, but more moderately. For, distributors' and consumers' loans will tend increasingly to reach rockbottom, even as manufacturers' inventory accumulation and private plant expansion draws to an end. As far, however, as war producers may have financed current needs out of accumulating tax reserves, business bank loans may receive a fillip.

total 85,000 cars in each case. Heavier loading requires more time, and where demands on return runs do not utilize full one-way capacity, some cars must go back empty. But even if real savings do not come to 170,000 cars, they are nonetheless appreciable.

Cautious on Crosshauls

The only remaining field promising big savings is elimination of crosshaul-Thus far, the only definitive action WPB has taken is to move for pooling and zoning of tank-car shipments due to the extreme shortage of these facilities growing out of the diversion of tankers to war and the consequent petroleum transport problem. Other bans on crosshauling, as in steel, still are under consideration, and drastic action may yet be forthcoming.

Upward revision of the "Little Steel" formula will come to the fore as an issue next week. John Lewis's mine-worker policy committee is expected to ask for higher wages when it meets next Tuesday, and, more important, the C.I.O. executive board may launch a similar campaign when it meets next Friday.

Hands Off Power!

That's WPB's edict to Ickes and Olds, implicit in naming of Krug as czar over entire generation program.

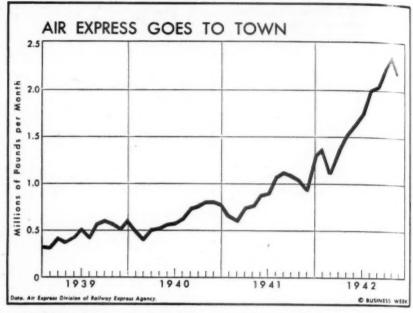
Immediate implication of WPB's establishment of an Office of Power Director with authority comparable to that of Rubber Czar William M. Jeffers is the notice it serves that the war agency intends to go through with its power generation program without interference from Secretary of Interior Harold L. Ickes or Leland Olds, chairman of the Federal Power Commission.

 Nelson Fed Up—Chairman Donald M. Nelson was fed up with the internecine government sniping over electricity when he signed the orders this week that brought J. A. Krug back into the field as wartime power adminis-trator. Only three weeks before, Nelson had gone to the President (BW-Jan. 9'43,p8) in an effort to stop the Federal Power Commission from compiling new reports of future power shortages each time an old prediction soured. For months he has been beating off repeated attempts by Ickes's public power boys to win reinstatement of some of their pet projects.

Krug, on leave as manager of power for Tennessee Valley Authority, is one of WPB's up-and-coming young men. It was he who developed all but the trimmings on WPB's power program.

• Free Rein for Krug-So Nelson's so-

lution was to shift Krug back, give him



a virtual free rein to run the show. This wasn't done until Nelson was sure of White House approval. Setting up Krug's office apart from WPB's own bureaucracy puts electric power beyond the reach of Curtis E. Calder, WPB's new Director General for Operations and president of American & Foreign Power-thus averting Roosevelt's chief fear that power administration might drift to private utility dollar-a-year men.

More far-reaching than Nelson's action in the power field, however, is the likelihood that putting Krug on top is the first move in a showdown with Petroleum Administrator for War Ickes for control over all fuels-oil, if not coal. • Extensive Field-With his authority over electric utilities, Krug also becomes WPB's czar over natural and manufactured gas-and water and communications as well. WPB and PAW already have tangled over the intertwinings of oil and gas, and these two fuels are now generally conceded to present a far more complicated rationing problem than electricity.

To avoid what might become a dangerous gas shortage by next winter, Krug will need some of the same critical pipeline materials Ickes requires to move oil. And the Kansas City gas curtailment program put into effect by WPB this winter reveals the complications that arise when industrial users are caught between conflicting oil and gas curtailment measures.

 Not Sold on Ickes—Contrary to what is probably a general impression elsewhere, WPB is known to feel that Ickes hasn't done a particularly good job of allocating oil. If the ensuing months bring to a head Ickes's ambition to become over-all administrator to integrate fuel allocation programs for next winter, WPB's candidate for the job looks like Krug.

Airlines' Record

With fewer than half the planes, they have doubled their volume of air cargo and lifted passenger traffic 14%.

The record of U.S. domestic airlines in the first full year of war is: air-express volume doubled, passenger traffic up 14%, with half the number of planes. • Fleets Are Slashed-The future looked black indeed when the airlines' 352 transport planes dwindled through government levies to 166; and there they froze last May for scheduled interstate operations. When this blow fell, passenger-load factors had reached 68%an exceptionally high figure. Daily mileage flown per plane was nearly 1,200.

So the airlines reduced schedules, eliminated nonessential routes and stops, standardized equipment, and further improved the highly efficient methods of maintenance and servicing which make it possible to keep a plane working longer hours. Passenger-load factors were pushed up to 80%, daily mileage flown increased to 1,500.

• In Summary-The following table gives the basic statistics for the domestic airlines in 1941-42:

tic animic	2 111 1771-	14.	Percent
	1941	1942	Change
Revenue			
miles	1,491,734,671	1,700,577,524	+14
Passengers			
carried	4,060,545	4,446,297	+ 9.5
Miles flown.	133,022,679	126,200,000	- 5
Seat miles			
flown	2,316,205,507	2,230,000,000	- 3.76
Express			
poundage.	19,209,671	40,340,319	+110

Despite the terrific increase in pressure of operations, there was no drastic increase in passenger fatalities-35 in 1941, 43 last year. Statistics on the more direct activities of the airlines in the war effort are necessarily secret, but the extent of air-cargo contract operations for the armed forces and government agencies (BW-Dec.19'42,p30) is not generally realized. The mileage flown and poundage carried in these operations all over the Western Hemisphere is now greater than that of the regularly scheduled operations.

• Solid Base—This achievement is the foundation of a greatly expanded network of international air routes which will have profound effect upon future world trade. Further expansion will occur as rapidly as cargo planes become available and personnel is trained for the work. The problem of developing personnel is being handled by the new Airlines War Training Institute in cooperation with the Civilian Pilot Training Program and the Army and Navy.

While the domestic services were transformed into international lines by contract operations, our foreign airlines expanded their routes all over the world. The African service, instituted by Pan American Airways and later militarized, contributed substantially to the solution of the supply problems of the Middle Eastern campaign.

• Atlantic Flights Doubled—Since Pearl Harbor, P.A.A. flight operations over the Atlantic have more than doubled. Equipment has been stripped to increase the normal cruising radius to 4,000 mi., and Clipper payloads have been increased nearly 2,000 lb. American Export Airlines is operating across the North Atlantic under contract with the Navy Dept. In South America, extensions have been made to the nationalized airlines which are subsidiaries of P.A.A., and Pan American-Grace is now operating all-express service from Balboa to Lima.

Civilians Get a Break

WPB feels slashes in domestic economy are nearing point where morale is endangered; Office of Civilian Supply prepares to see that CMP is made to provide a cushion.

Scratch a WPB official on the subject of civilian production, and he'll tell you we are approaching the bottom of the graph, that further drastic cuts may damage civilian morale seriously. Cautious statements, hinting that "bed rock" is in sight, are appearing regularly, and WPB Chief Donaid Nelson has informed a press conference that not much would be saved for the war effort by further cuts.

• Claims for Civilians—What all this means in terms of figures is that total civilian production will be pegged (on a physical volume basis) about 15% below 1942 levels, or something like 30% below the 1935-39 era. Furthermore, the Office of Civilian Supply—long accused of doing more cutting than supplying—is promising to act as a real claimant agency under the Controlled Materials Plan.

Chances are that OCS means it this time. With topside WPB officials growing uneasy over the civilian situation (and Army and Navy inclined to be sympathetic to such jitters), OCS will lose its official cheering section if it fails to deliver.

• No Increase Seen-Heretofore, OCS has been inclined to cut right and left, and there was little WPB dissent when autos, refrigerators, and even safety razors were banned. But now that civilian production (except housing, containers, and recreation-health equipment) is down to 250,000 tons of steel annually (compared with 20,000,000 in 1940), it

becomes a serious question whether the last dab of steel can be used to better advantage in beer bottle caps or tanks. Right now, WPB is voting for beer.

Hopes that WPB will rebound from rock bottom, and possibly permit increases in critical materials for civilian use, are not unfounded. But they are pretty slim. WPB would rather have increases come about through one of the following channels:

(1) Ships returning from foreign military areas. Because they must make rush trips, they grab any handy cargo without sorting civilian from war-necessary items. This is apt to give the civilian a break via imports.

(2) The Controlled Materials Plan. Army and Navy presumably will get everything they want under the plan avoiding competition with civilians. This may release some civilian merchandise that previously would have gone to the military forces.

(3) Simplifications, standardizations, and substitutions in many materials. This should be the surest booster.

• WPB Studies CMP Papers—Meanwhile, WPB is scanning the papers civilian manufacturers have to fill out to be eligible under CMP during the second quarter. By the looks of things, many manufacturers will fail to make the deadline, will remain longer under Production Requirements Plan (a disadvantage, since CMP is almost a sure-fire guarantee of materials, whereas PRP is not).

So far there have been only about 100 replies, which WPB is tackling on a first-come, first-served basis. As information becomes available on various industries, they will go CMP during the second quarter. Otherwise they must wait until July.

DRAIN ON CIVILIAN FOOD

The Southern California Restaurant Assn., representing some 4,500 eating places, will ask Washington authorities for a "meal ticket" plan to give restaurants credit for scarce foods eaten by service men on their way through the city. Argument will be that the 200,000 service men who eat in Los Angeles restaurants weekly take about 100,000 lb. of meat out of civilian allowances.

If the armed forces were given meal tickets when going on leave, to be turned in wherever they ate, the caterers argue that they should then be able to charge this food against the military quota and buy equivalent amounts for regular civilian customers.



At Casablanca (Spanish for White House), President Roosevelt and Prime Minister Churchill laid plans for a final, climactic drive on Nazis (pages 5, 13).

Laying a Ghost

Wraith of unemployment driven out, New Castle now mastering problem of finding enough homes for workers.

The ingenuity that saved New Castle, Pa., from becoming a "ghost town" several years ago is functioning again through an energetic "Remodeling for Victory" campaign to house war workers who have been drawn to the city by the industrial revival.

• Conversion Program—A few years back, houses in New Castle were begging for tenants, but now the citizens are engaged in a campaign, attracting much attention, to convert the available homes, store buildings, and warehouses into extra dwelling units. The housing problem is being attacked with the same individual enterprise that restored New Castle to the industrial map.

Castle to the industrial map.

Between 1920 and 1939, industries employing more than 7,000 persons were lost to New Castle, which was singled out for study by labor representatives and government departments as a victim of technological progress. The ron, steel, and tinplate activities that made it a one-industry town came to a standstill because the mills were obsolete. It was estimated that 52% of the community's population was on relief, WPA, or unemployment compensation rolls, and another 12% was trying to get on

• A Two-Point Policy—In 1939 the Greater New Castle Assn. was organized, which gave labor, industrialists, and business men a voice in the campaign to bolster the industrial scene. A two-point policy sought to develop expansion with local capital and encourage diversification of industry and business. Aided by the war boom, the campaign attracted new industries, and the idle steel and tinplate plants now are occupied by the Aluminum Co. of America, the Standard Steel Spring Co., and the United Engineering & Foundry Co.

With industrial successes exceeding its dreams, New Castle awoke to the realization that living quarters must be found for 400 new families. Out of this new problem came the Universal Plan, conceived by the Universal Sanitary Mfg. Co. of New Castle, makers of noncritical vitreous-china plumbing fixtures.

• Morale Builder—The company first proposed its plan of making two homes where only one was before as a morale builder among dealers to stimulate sales effort. An elaborate portfolio, containing hints for arousing interest of property owners in converting facilities to house more persons, was issued.

But the plan soon was adopted as a community project. Other companies

and civic associations sponsored an allout campaign in the newspapers and on the radio to encourage citizens to convert idle rooms into apartments for war werkers. Remodeling-for-Victory emblems are furnished stores and contractors, and small Victory Campaign (V/C) stars are applied for every conversion job handled. The property owner also receives stars for every worker he houses. • Endorsed by FHA-The Universal Plan was endorsed by the Federal Housing Administration, which insures conversion loans. Action on a federal housing project, which would require much vital material, was delayed pending outcome of the conversion plan. Less than two months after the campaign was launched, about 100 conversion jobs were underway. The projects are listed with a central housing committee at the rate of three a day. Priorities on a few vital materials at first proved a stumbling block, but this was solved with the cooperation of FHA and the War Production Board. In some districts, zoning regulations were modified to permit the conversions.

The National Housing Agency estimates that 850,000 dwelling units must be procured by expanding the capacity of existing structures to help care for the 1,600,000 workers migrating to war plant areas all over the country. New Castle is weeks ahead of other areas.



FOR THE DEFENSE

Heeding the plea for production manpower, more and more attorneys (under bar associations' plans) are dividing their time between courtroom and factory. Typical is B. Vincent Imbrie, Pittsburgh lawyer, with tools of his new trade—plug gage and pliers (the latter being used as calipers for picture purposes). Imbrie spends three hours daily in his office, eight in a war plant.

Graphite Easing

Opening of three domestic flake mines soon will end our dependence on Madagascar and aid production of alloys.

Mid-February will see the end of one critical material shortage—flake graphite for the crucibles used in alloying metals. Within the next couple of weeks three new graphite mines with a capacity of about 300 tons a day each will come into operation and just about free the country of dependence on imports from Madagascar.

• Flake Deposits Plentiful—There's always been plenty of domestic and artificial graphite of the amorphous variety in this country, but for the flake graphite, which combines the tensile strength, high conductivity, and low coefficient of expansion needed for crucibles, we have relied since the last war on Madagascar. Deposits of flake graphite are fairly plentiful here, and the Ceylon Graphite Co. has had a mine working at Goodwater, Ala., for some years.

But domestic graphite got a bad name in the last war, when anything that was black was sold for graphite. Except perhaps for the Pennsylvania deposits, quality of the domestic product is somewhat low; the flakes are smaller than Madagascar graphite, which lowers the strength of the crucible. And the costs here have been a little high, though it is now expected that price of the domestic graphite can be held somewhere near the 7½¢-a-pound price of top quality Madagascar.

• Demand Doubled—Just before the fall of Singapore, a big shipment of graphite came in from Madagascar. Since that time we have been drawing on that supply to meet a demand running about twice normal, aided by small amounts imported by the Metals Reserve Co. MRC has a fund of \$5,480,000 for accumulating a stockpile of graphite, but such graphite as it has been able to buy has had to move into immediate use.

Last July, the Southwestern Graphite Co. brought in a mine at Burnet, Tex. Three other mines were supposed to come in about then, but there was a shortage of ore-processing equipment. Consequently it's been touch-and-go to meet the need.

• Two in Alabama—Two new mines will get into operation at Ashland, Ala. One is being run by a Haile Gold Mine subsidiary, Crucible Flake Mining Co., the other by a new firm, Alabama Flake Graphite Co. About the middle of February, the Benjamin Franklin Graphite Co. will start producing from a mine at Chester Springs, Pa.

Monotone Monogan of 1125 Close of Chaile being Monotone years of age, the Majorith day of Saptable A. D., 1876, with the consent and entire approbation of my fother frostery freely fre



OLD CALIBER

Blacksmith George Metzger, 84, still wields an expert hammer at Philadelphia's Disston plant where he began as office boy in 1870. George, now whanging out war goods, was indentured as apprentice six years, collecting \$4 a week, kicking back \$1, "to learn the art, trade, or mystery of a blacksmith under the instruction of Henry Disston & Sons." An obedient boy, he got back "half of said dollar per week retained, without interest, for his clothes." The old smith has worked for four generations of Disstons, from helper to forge shop superintendent, rarely misses a day.

Sounding Board

Lacking voice in capital, small business men hurl their brickbats at Murray committee and hope for the best.

Small wholesalers and retailers have no unified voice in Washington. To Sen. James E. Murray, this lack of a sounding board has meant an opportunity to expand the field of his Committee on Small Business (BW-Dec.26'42, p8). So last week the committee rounded up a score of merchant witnesses and let them sound off to their hearts' content.

• No Holds Barred—Grateful for the opportunity to unburden themselves, the merchants pulled out all the stops. Here, in approximate order of importance, is the list of their lamentations and brickbats:

(1) WPB's Office of Civilian Supply

To a man, the distributors accused
OCS of cutting the heart out of civilian
production instead of giving it some life.
Few of the witnesses felt that there need

be any real civilian shortages. Suggestions to the contrary were greeted with renewed accusations of "bureaucratic bungling."

(2) OPA Price Ceilings—It was lucky for Leon Henderson that he didn't get into the clutches of the complaining merchants. He was accused of setting ceilings so low that, for one thing, supplies of meat and food were endangered. Or were there many kind words for OPA's new system of applying ceilings on a nation-wide basis. For in the case of "victory line" rubber sundries, OPA has set a higher nation-wide ceiling for little merchants than for mass distributors, causing the complaint that Uncle Sam is advertising the fact that the big merchant sells cheaper than his small competitor.

(3) Trade Associations—That Washington has slammed the door in the face of trade groups was all too evident from the comment. OPA, especially, was accused of unfailingly giving associations the brushoff.

(4) Distribution System—Quite sensitive that economists in the war agencies regard distribution as uneconomical and sometimes outright wasteful, the merchants want a more respectful atti-

tude. They would have OPA and WPB regard them as the civilian's quarter-master corps.

(5) Manpower—The War Manpower Commission has failed to classify the distributive trades as essential, and the U. S. Employment Service has been shooing repairmen and mechanics into war plants. In the opinion of the witnesses, the supply of manpower should not be drained to the point where the distribution system is likely to be wrecked.

• What They Want—The merchants want a special civilian supply administrator who is not tied to WPB. They want price ceilings set in accordance with individual store markup practices, taking a specific month or year as a base period.

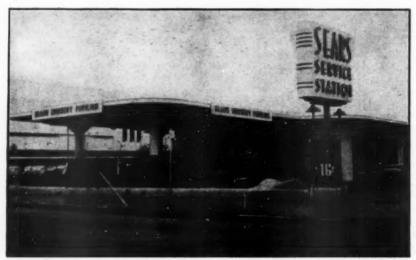
The druggists want a special law that will enable them to buck the mass bargaining power of the chains and big distributors. Their proposal would permit several stores to buy collectively without the necessity of organizing a full-fledged cooperative in order to escape the stringencies of the antitrust laws.

• For Steering Purposes—The testimony will be used in steering legislation bearing on the distributive trades. Also, it may result in a stronger proposal for a law enabling Congress to define the duties and latitude of the major war agencies.



SMALLER PLANTS BOSS

New director of the Smaller War Plants Corp. (WPB) is Colonel Robert Johnson, appointed by President Roosevelt to supplant Lou E. Holland of Kansas City. Johnson is also head of the Army's busy New York ordnance district and in that capacity has been known as a friend of small business (BW-Jan.23'43,p7).



FROM ROADS TO ROSES

That's the hope of Sears, Roebuck & Co. which, watching traffic dwindle under the influence of tire and gaso-

line rationing, has filled most of its Houston store's master-type service station with a full line of nursery stock. What gasoline sales are left are handled by the rest of the station.

Labels Sneak In

Prices are set for canned grapefruit juice by grades in an order rammed through by OPA just as Brown takes over.

OPA has issued one of the most singular price orders in its history, General Maximum Price Regulation 306, which sets prices of canned grapefruit juice by grades. Significantly, the order was signed merely with the word Administrator. Later the name Prentiss Brown was added for the Federal Register.

• Old Guard Victory—What happened was that OPA rammed through the regulation, which is cordially hated by almost every canner, in the interregnum between Leon Henderson and Brown. The fact that Brown eventually signed the document doesn't mean much. He can revoke it if he chooses to please the canners. But so far as OPA's old guard is concerned, a victory has been won.

Hereafter canned grapefruit juice (other canned goods will come under similar controls later) must bear labels showing either Dept. of Agriculture or continuous inspection system grades (BW–Jul.6'40,p44). What's more, the grade must be printed in type "at least as large as the declaration of net contents shown on the label."

• Processor's Ceiling—Simultaneously, the regulation slaps dollar-and-cents ceilings on the pack at the processor's level. The differential per dozen No. 2 cans between A and C grades of grape-fruit juice is 10¢. Between C and substandard there's a 20¢ spread.

Due to the speed with which GMPR 306 was banged out, the order was never really finished. The original idea had been to include prices for wholesalers and retailers, incorporating the novel idea of identical prices by areas. This part of the regulation may come yet.

• March Freeze Doomed—If and when the wholesaler-retailer end of GMPR 306 is completed, it will show the shape of things to come as far as OPA's new price-regulation philosophies are concerned. For the price agency is getting set to junk the principle of a March freeze and strike out from a new angle.

Henderson's March ceilings were merely a temporary expedient to arrest the cost of living so that farm and wage controls later could be imposed justifiably. Now OPA believes the time has come to abandon the March idea because (1) every store has its own special ceilings, causing utter confusion among consumers, and (2) ceilings tied to a certain date can't be held without the use of subsidies.

• Two Price Principles—On the dual presumption that the consumer wants a simpler structure, and that extensive use of subsidies is politically impossible, OPA plans to set manufacturer ceilings in dollar-and-cents terms, and whole-saler-retailer ceilings on a combined margin-and-area principle.

Under either the margin or the dollar-and-cents system, a gradual rise in the price structure must be taken for granted. But since OPA has a firm rein on prices at the manufacturing level, it can space the rises so that the upturn is gradual, controlled.

• Margins in Use-To some extent, OPA already is using the margin system in the food field. Approximately 35% of average grocery sales today are made under margin—not March—cilings. The different classes of stores employ different margins, thus:

Class of Store	Margins On 16 Non-	Average f Permitted Margin 112
Independents, sales		
under \$20,000	23%	30 %
Independents, sales		
of \$20,000 to \$49,9	99. 22%	30%
Independents, sales		
of \$50,000 to \$249,9	99. 21%	30%
Chains, sales less	****	****
than \$250,000		26%
Any store with sales		244
of \$250,000 or mor		26%
" Based on net cost	to grocer.	

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Similarly, certain foods are priced by margins at the wholesale level:

Type of Wholesaler	Average of Permitted Margins, 18 Items
Retail-owned cooperative	6%
Cash and carry	8%
Service and delivery	11%

• Consumer Baffled—Trouble with the margin system thus far is that it still doesn't help the consumer's understanding of ceiling prices. For instance, if grocer A in Pittsburgh buys canned vegetables f.o.b. California, his prices will be higher than those of grocer B, who buys f.o.b. Indiana, even though A and B are using identical margins. This is where pricing by areas—as originally contemplated in GMPR 306—comes in.

Under the area system-in reality an adaptation of the basing-point systemthere will be an equalization of transportation and similar charges so that retail prices will be the same, class of store by class of store. Suppose OPA can equalize shipping and other costs so that grade A Florida natural grape-fruit juice will sell to the Pittsburgh grocer for \$1.32 per doz. No. 2 cans. Suppose also that small grocers are permitted a 26% margin, and big ones 22%. Then in every small store in the Pittsburgh area the ceiling price per can would be 14¢, and in every big store 13¢. Thereby OPA could advertise to Pittsburgh housewives: "The maximum price of grade A Florida natural grapefruit juice in No. 2 cans is 14¢; don't pay more anywhere."

• Storm Signal—On paper, this solution hits the nail on the head. It may have practical difficulties, though. The really big potential squawk might be that OPA would be divulging trade secrets. For while the average consumer knows that sometimes the prices of the chains and the big stores are cheaper than the small independent's, the government never officially has advertised that fact. Should the chains decide to advertise that their ceilings, grade for grade, are officially a penny cheaper, a storm may brew.

In fact, an inkling of the storm has already appeared in the drug field where mail order houses got lower nation-wide ceilings on certain types of rubber sundries than other retailers (page 17).

Texas Tin: International Pawn?

First major smelter in Western Hemisphere solves the immediate problem of wartime need, but the U. S. now is sitting in British-Dutch poker game where the blue chips are tin.

After generations of dependence upon British and Dutch interests for metallic tin, the United States is now operating in Texas a tin smelter—the only one of significant capacity in this hemisphere and one of the only two big ones left in the hands of the United Nations.

• Can Meet Normal Demand—That smelter can now turn out all of the tin that America needs for war uses and essential civilian needs. This is a total almost equal to what normal demand is likely to be after the war. And in the very near future, when the work of installing three new furnaces and additional plant equipment for roasting and leaching processes is completed, it will be able to turn out twice that amount of tin.

But what the smelter can produce now and what it actually is producing are, of course, two entirely different figures. Since the controlling factor in present operation—and the all-important factor in determining whether or not the United States will really be independent of British and Dutch smelters after the war—is the supply of tin ore available, the trade believes on the basis of public data about stockpiles and receipts that the present production rate is little more than half of existing capacity.

• Supported By Facts—The statistics on which these conclusions are based must

remain sketchy because of censorship regulations, but the following facts and figures which the government has either officially released or at least permitted to be published provide substantial sup-

On May 1, 1942, 14 months after the smelter project was officially initiated (BW-Mar.8'41,p61), Charles B. Henderson, president of the Metals Reserve Co., which is responsible for plant operation, announced that the smelter had produced its first tin on Easter Sunday, Apr. 5, 1942. He also said that new enlargements, then in progress, would boost annual capacity to 52,000 tons. On Aug. 1, when those enlargements must have been at least well along toward completion, Henderson announced that a new expansion would increase capacity to 94,800 tons.

• Consumption Slashed—On the consumption side of the ledger, the War Production Board is quoted in the London Economist of Nov. 28, 1942, as estimating total U. S. consumption of tin at 65,000 tons last year, or roughly one-third less than in the year 1941.

On Jan. 9, WPB announced that "U. S. tin consumption will be cut another 12,000 to 15,000 tons in 1943." Actually, thanks largely to a 50% slash in the use of tin for civilian needs, the U. S. consumption rate had already been cut at the year-end to a rate of

50,000 tons a year or less, according to trade estimates.

As for postwar requirements, these can be roughly gaged by the peacetime consumption figures reported by the American Bureau of Metal Statistics:

1932.				*					.40,600	tons
									.61,100	
1934.			*	*		*			.53,300	tons
1935.					*		*		.62,000	tons
1936.			*				×	×	.74,000	tons
1937.									.78,100	tons
1938.									.50,600	tons
1939.		ı	ı			ı	ı		69.041	tons

• Savings by Electrolysis—Wider application of the electrolytic process of tinplating should, however, reduce by onesixth or more the amount of tin that will be needed to meet the same requirements. Tinplate normally accounts for half of our use of the metal, and the electrolytic method makes possible a ratio of 0.5% tin to 99.5% steel, as contrasted with 1.5% tin and 98.5% steel for the hot-dipping process.

Crux of the problem now and in the postwar era is ore supply. When the smelter began operation almost two years ago, Henderson of Metals Reserve reported that stocks totaling 75,000 tons of ore concentrates were on hand. Metals Reserve was also reported to have on hand stocks of metallic tin variously estimated by the trade at 40,000 to 50,000 tons—stocks that resulted from the vastly accelerated smelting operations in British and Dutch refineries—during 1940 and 1941.

• Private Inventories Dwindling—Private industry was also building up substantial inventories in the days before Pearl Harbor, but these are now being depleted. Metals Reserve has not, to the best of trade knowledge, released

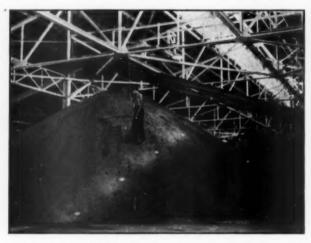


When additions to the Texas plant are finished, it will be able to produce almost twice our normal peacetime needs.

any of its supply but has pursued an obvious policy of smoking out all stocks in private hands. As for present supplies, the London Economist of Nov. 28 also reported that the U. S. ore supply agreement with Bolivia, the only important source of ore still accessible

to the United Nations, provided for the shipment of ore at a rate sufficient to supply only 25,000 tons annually.

It is the geography of tin that accounts for the present stringency—and the somewhat indefinite future of the Texas smelter. Tin ore is principally concentrated in only two important producing areas, Bolivia in this hemisphere and British Malaya and the Netherlands East Indies in the Orient, although incidental deposits are found in widely scattered parts of the world. Production data for the years 1937 and





If America could get all the concentrated ore, assaying 74% tin, that it wanted from the Far East—20,000 tons of it were stockpiled in Texas (upper left) before the Japanese closed

shipping-tin refining would be no problem. The ore could go directly to the furnaces. But low-grade Bolivian concentrates (upper right), grading from 18% to 50% tin, on which we are dependent now, present a complicated processing problem. Solution lies in constant chemical analysis (left) to determine what reducing agents, and how much of each-limestone, hydrochloric acid, other chemicals-must be added to the mix of new ore and old slag at every step. First, the ore goes to roasters, giant cylinders through which a jet of flame is played to burn out the volatiles (a special device has been installed to trap the arsenic fumes that might cause trouble - and damage suits). Next comes the leaching process, most secret of all tin refining techniques de-

veloped by the Dutch; chemical action and heat in giant rotating spheres (lower left) separate the tin from the iron, copper, bismuth, and other impurities. Finally, the ore is ready for smelting, and the furnaces are charged. But even when the tin pours out into one ladle and the slag into another (lower right), the process isn't ended. The tin simmers in large vats where the last of the dross is removed, for it must grade 99.8% pure and can contain only seven impurities, no one of them in an amount greater than 0.04 of 1%. As for the slag, it reenters the process, sometimes for a third or fourth trip. Nothing is wasted-not even the smoke. This passes through Cottrell units in which high-charged wires trap the particles of the easily oxidized tin that are volatilized in the process.





20 · General News

Business Week • January 30, 1943

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Envelopes - Transparent Containers -Paper Cups - Writing Paper - Note Books - Toilet Tissue - Paper Towels 1938, immediately preceding the outbreak of the war, tell a fairly typical story (all figures are in long tons of metal obtainable from ore):

	1937	1938
Malaya	77.542	43,247
Bolivia*	25,024	25,371
Netherlands East In-		
dies	39,825	21,024
Thailand	16,494	13,520
Nigeria	10,468	7,313
Belgian Congo	8,856	7,318
China	10,500	11,000
Burma	4,636	4,950
Australia	3,253	3,329
Great Britain	1,987	1,999
All others	9,467	9.568
Total	208,052	148,639

*Owing to various economic conditions, Bolivia's share of total production was reduced in these two years. A better estimate of her position can be obtained from current quota figures: Malaya, 95,474; Netherlands East Indies, 55,113; Bolivia, 46,768.

• Alluvial Ores—In Malaya and the East Indies the British and the Dutch have not only the greatest concentration of deposits, but also the highest grade ore. Ore from these sources—notably Holland's two famous tin islands of Billiton and Banka—is alluvial in character, and because water action over the centuries has washed out most of the impurities, it will assay 74% pure tin. Furthermore, only relatively simple dredging operations are required to obtain the ore.

Bolivian ores require hard-rock mining operations and are of much lower grade, concentrated ore ranging from 18% to 70% in tin content. Roughly half of these deposits are controlled by Simon Patiño, and these are definitely the better grade ores, ranging in the neighborhood of 50% to 70% tin content.

• Metallurgical Monopoly—The British and the Dutch not only have controlled the most and the best of the ore resources throughout the years, but also have owned or controlled virtually all of the major refineries. Hence, in a very real sense of the word, they achieved and maintained a monopoly on the complicated business of tin metallurgy.

With high-grade ores, the smelting problem is not so complicated, but with the low-grade ores—virtually the only ones available to potential competitors of the British-Dutch combine—metallurgical techniques of considerable involvement are required to get 99.8% pure tin separated from the sulphur, antimony, lead, copper, iron, arsenic, bismuth, silver, zinc, cobalt, nickel, and the other elements common to junky concentrate. The problem is especially complicated by the fact that tin oxidizes and vanishes into the air very easily in the roasting and smelting processes.

• Cartel Controls Prices—Through the combination of resource ownership and an almost exclusive methodology in tin refining, the British and Dutch through the International Tin Committee have been able to regulate tin prices and production with a high degree of effectiveness. (Often accused of holding tin prices at an artificially high level through its quota system for each important producing area, the cartel can now retort that the United Nations would be in a tight spot indeed if prices had not been held at a level sufficiently profitable to stimulate production in the high-cost, low-grade marginal areas, notably Bolivia, on which the Allies now depend so heavily.)

There has been some tin smelting in Argentina, Belgium, France, China, Portugal, Japan, French Indo-China, Belgian Congo, the Transvaal, and Germany (where new processes of dealing with low-grade ores were pushed to a high degree of successful operation prior to the war). Actually, however, there are only a half dozen smelters of real

consequence in the world.

• Arnhem First Casualty—When the Germans swept across the Low Countries, the Arnhem smelter in Holland, which refined the Billiton tin from the East Indies, was listed by the United Nations as the first tin casualty of the war. Then with the fall of Penang and Singapore, the British lost the important Malayan smelters of the Eastern Smelting Co. and the Straits Trad-

Finally, the smelters of the Dutch government in Batavia and on Banka and Billiton islands fell to the Japanese. That would have left the United Nations solely dependent upon the smelters in England, principally the works at Liverpool, if the Texas smelter had not been ready.

ing Co.

• Pact Signed in 1940—More than a year before Pearl Harbor, the peril of the situation in the Far East dictated the advisability of building a smelter in the United States (BW—Jun.15'40,p34) to operate principally on Bolivian ores. supplemented as necessary and possible by high-grade ores from the Far East. On June 28, 1940, a contract was negotiated between the International Tin Committee and the Reconstruction Finance Corp., as the parent corporation for Metals Reserve, to obtain the necessary ores; this agreement, like the ones which have succeeded it, called for stimulated production, principally in Bolivia, and it also specified a 30% increase in export quotas.

increase in export quotas.

Then on Feb. 5, 1941, Metals Reserve closed the deal with Holland's N. V. Billiton Maatschappij to build and operate the refinery in Texas, through its subsidiary Tin Processing Corp. Bids were sent to various smelters, but the Billiton people got the call because they had developed an especially effective technique, reputedly based on the German experimentation, for the handling of low-grade ores, and such low-grade Bolivian ores—those not controlled by



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WISTONS REQUIRE POSTING INDEX (10%)

MACHINE ACCOUNTS
TYPHODIST LIGHTS (15%)

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HOLMESOALE BOND (1895)

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Patino—were all we could expect to get.

But the ink had barely dried on the contract before disaster struck. B. C. M. van der Hoop, one of the key Dutch officials who had been scheduled to build and operate the plant, was killed Feb. 26 in the crash of the Eastern Air Lines Mexico Silver Sleeper at Atlanta—the same crackup that almost cost Eastern's president, Capt. Eddie Rickenbacker, his life. J. van den Berg was then brought from the East Indies to

manage the project.

• Distrusted the Japanese—So conscious of the Japanese menace were the Dutch even at that time that van den Berg, one of the few technicians competent to operate the Arnhem process, refused to trust himself and his family to slow boat travel; he insisted on being flown

to America.

The original contract with the Dutch specified a fee of 4% for building the plant, and as it has expanded to almost six times its original specifications at a total cost of \$6,300,000, that proposition alone has paid out well for Billiton. But the Dutch also were guaranteed 1% on the value of all tin produced. (Its price is fixed by OPA at 52¢ a

pound.)

• Runs Five Years-The contract was set for a period of five years. Metals Reserve expects by the end of the contract period to have chemists and technicians thoroughly familiar with the process and a crew of American workmen trained to operate the plant. So intent is MRC on achieving this objective, for example, that there has been no attempt so far to effect any byproducts recovery; sole emphasis is on making tin-and tin from any kind of ores. Samples have been obtained and worked from all parts of the world-Mexico, where Metals Reserve and the Board of Economic Warfare are making great efforts to develop tin resources, Argentina, Brazil, China, and even Comwall, England. Hopes for American ores are not very impressive, although small, extremely low-grade deposits have been uncovered at Sima, Calif., and Franklin Mountain, Tex.

Much as private industry-particularly the producers of competitive metals such as nickel-can be expected to protest the idea of federal operation after the war, probably only the United States government (if even the United States government) is big enough and powerful enough to deal with the International Tin Committee. Unless the cartel makes tin ore available to the United States after the war, the fate of the Texas smelter is sealed. That explains in part the desperate search for new sources of supply, and for supplies large enough to keep a smelter with a capacity as large as ours operating at an efficient level.

• Competition Would Jar Profits-It is doubtful, of course, that the smelter

could operate profitably on the present low-grade Bolivian concentrate if it had to meet the determined competition of the British and the Dutch, assuming that they recover their high-grade deposits in the Far East. Profits from smelting the ore for the United States, which normally consumes almost half of the world production, are sufficiently attractive that the British and the Dutch are not likely to surrender them easily.

In a price war they might be willing to do some loss-leader selling for a while, if they thought they could force the Texas smelter to cease operation. The simple existence of that plant, backed by recourse to ore deposits—no matter how inferior—would, of course, always be a strong card in Uncle Sam's

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• Patiño Holds Key—Currently there is speculation to the effect that Patiño will be induced to stop sending his bettergrade Bolivian ore to Liverpool and ship it instead to Texas, thus saving shipping space (the refined product would require much less tonnage) and minimizing the submarine menace to United Nations' tin supplies. Texas will soon have capacity to handle his output as well as that of the low-grade Bolivian producers. Such a deal with Patiño might have important postwar repercussions.

Evidence that the cartel is already preparing to deal with the United States in the postwar world is supplied by the action of the International Tin Committee in providing for two delegates from the United States. This was announced when the committee renewed the quota agreements of December, 1941 (BW-Nov.21'42,p106)-an empty gesture in view of the fact that most of the affected properties had since passed into the hands of the Axis. Admitting the United States to membership may similarly be only a gesture, for there is no positive assurance that the committee will give U. S. delegates votes. The voting power, as the committee is now established, is as follows: Malaya, 5; Netherlands East Indies, 4; Bolivia, 4; Nigeria, 2; Belgian Congo, 2.

• International Poker-Significantly, it is provided that one of the United States members will represent the govemment and one will be a direct consumers' representative. The tin committee's action may be one reason why the powers to negotiate contracts for foreign purchases, such as tin, were taken from the Reconstruction Finance Corp. and given to the Board of Economic Warfare. BEW knows how to play international poker-at least, it's been learning for two years-and when you are playing for a big tin jackpot, with a crowd that's practiced in the arts of international bluffing and calling, an expert is called for.

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THE WAR-AND BUSINESS ABROAD

Postwar Markets Take Form

U. S. and Canada plan to develop regions opened by Alcan highway, China and Russia bid for reconstruction machinery, and Brazil and Argentina seek to equip big new factories.

It is plain this week that American executives who have an interest in selling goods in world markets after this war need to begin laying their plans at once.

As a logical sequence to the formal opening of the Alcan highway (BW—Jan.16'43,p20), the joint economic committees of the United States and Canada this week announced a vast scheme for the exploitation of 1,000,000 sq. mi. of Alaska, British Columbia, and Yukon Territory as soon as the war ends.

New Trade Vistas

It is probably just a coincidence that two other great markets are developing along a logical extension of this highway. For nearly a month, Soviet authorities have been expressing intense interest in postwar economic relations with the United States, because they hope to place big orders for heavy machinery which will be needed to rehabilitate the parts of their country that have been destroyed by the Nazis. And in Chungking, officials have made it plain that they are looking to the United States for the equipment and the tech-

nical aid that they will need to put China on its feet after the war is over

These warnings of sharp postwar competition for all kinds of industrial equipment help to explain the speed with which Latin America is drawing up the full details of its industrialization programs (BW-Jan.9'43,p92) and laying plans to place orders so as to get ahead of the buying rush. Both Argentina and Brazil have tar more advanced plans than is generally realized.

Now on the verge of completion is the biggest industrial survey ever to be carried out in Argentina. Started twelve months ago, the survey was conducted by the Armour Research Foundation of Chicago under the auspices of the Argentine Trade Promotion Corp., an organization financed by the Argentine government and managed by United States and local business men (BW-Mar.21'42,p34).

Objects of the survey are to plan the long-term development of Argentina's industries and natural resources, to find raw material substitutes for those products formerly imported and now threatened by shortages, to suggest scientific



ARABIAN RATIONS

Another problem was dumped in the laps of United Nations when hungry Arabs in North Africa explained that a German commission had confiscated 80% of their crops—giving nothing in return. Impromptu ration boards passed out cards, redeemable for foodstuffs in tented warehouses.

Business Week • January 30, 1943



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read.

"RECRUIT" CARD INDEX CABINETS

These sturdily built wood card index cabinets are furnished in one and two-drawer units . . for 3x5", 4x6" and 5x8" cards. Ideal for card index filling. Finished in attractive medium dark green.

"FANFOLD" GUMMED FOLDER LABELS
For plain tab filing folders. Made in continuous
strip of 500 labels . . . can be fed into typewriter direct from packer . . . addressing is
faster and easier. Choice of several colors.

The Globe-Wernicke Co. .. cincinnati, o.

ways and means by which the demand for national raw materials and finished products can be created or increased, and to devise methods for improving existing products.

Argentine Industry Booming

Traveling by plane, train, automobile, or boat, the Armour field group zigzagged more than 17,000 miles over Argentina's vast territory. Factories, mines, estancias, farms, forests, plantations, laboratories, and schools were inspected by the group. Detailed notes and complete photographic records were obtained, while hundreds of samples of minerals, fibers, and cereals were collected and sent to the Foundation's laboratories in Chicago for analysis.

Already under way, as a direct result of the Armour recommendations. are a series of studies now being made in the United States by Argentina's two outstanding leather and footwear magnates, Señor Julio Gomez Palmes, president of the Argentine Tanners Assn., and Señor Felipe Fortunato del Rio, president of the Argentine Shoe Manufacturers Assn., who early this month visited the New York laboratories of the Tanners Council of America. To establish export standards for Argentine leathers, particular emphasis will be given to the necessity for a cooperative research laboratory in Buenos Aires.

Though scarcity of imported raw materials and serious shortages of fuel, machinery, and equipment have constituted major impediments to further expansion, the country's industries in the last few months have, for the first time, jumped ahead of agriculture as the backbone of the country's economy. Typical example of what is happening is the case of the textile mills, which, working 24 hours a day, are as much as six months behind in deliveries.

Argentina's long series of adverse trade balances with the United States, up to 1941, was one of the main reasons leading to the formation of the Argentine Trade Promotion Corp. Today, because of the inability of the United States to maintain its normal flow of goods to the Argentine and because of the latter country's increased exports, the trade balance for 1942 alone favors the Argentine to the extent of more than \$28,000,000 dollars.

Brazil Surveys Progress

Brazil, already in the war and eagerly expanding its industries both to cover immediate needs and to prepare for vast postwar industrialization (BW-Jan.9'43, p19), has just completed a survey of its recent economic progress.

Despite the shortage of fuel and certain raw materials, many Brazilian industries are experiencing a boom. Production in the textile industry alone was up 50% last year.

World War I gave the first real im-

THE LIGHTER, STRONGER, BETTER
THINGS OF TOMORROW WILL

BE BUILT OF
ELECTRIC FURNACE STEELS

Your Car of Tomorrow

Some day you're going to get a new car. And what a car! 'Most everything you've always wanted will be there—greater comfort, safety, power, economy, and more practical design. Automotive engineers already possess the "know-how" to build it—and every day are learning more from war experience about the special electric furnace steels they'll need to make it strong—and safe. These steels are now being produced in large tonnages—and will be available when wartime priorities yield to peacetime demands.

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Republic Electric Furnace Steels include the fine alloy and stainless steels which enabled the automotive industry to make such rapid strides during the past quarter century—steels which will lead the way in hundreds of new products in the world of tomorrow.

These are the steels with an exceptionally high ratio of strength to weight. With highest toughness,

hardness and resistance to wear, corrosion, elevated temperatures, subzero cold and that insidious thing called "fatigue". These are the steels with the qualities to make possible your amazing new car of tomorrow—just as today they are making possible powerful fighting machines that withstand the most exacting service.

Republic—long a leader in the development and production of electric furnace steels—is helping to supply war requirements today and will be ready for the future with a capacity for these fine steels already increased by more than 700%. In the world of tomorrow, look for these Republic Electric Furnace steels to bring longwanted improvements to factory, farm and home—better things to work with and to live with. Republic Steel Corporation, General Offices—Cleveland, Ohio. Export Department: Chrysler Building, New York, N. Y.

REPUBLIC ELECTRIC FURNACE STEELS

alloy...stainless..."aircraft quality"

—for vital working and structural parts in the automotive, aviation, farm implement, machine tool, petroleum, railroad, chem-



ical, food processing, marine, textile, refrigeration, heavy machinery, electrical, transit and general manufacturing industries.

SUBSTITUTE FOR MUSCLE

Globe Oil - Hydraulic Lifts Solve Manpower Problems

• Foot-controlled Globe Platform Lift speeds machine leeding.



Let a Globe Oil-Hydraulic Platform Lift do the heavy lifting in your plant . . . on your production line . . . at your loading dock . . . wherever women or older workers are doing your war-time job. Smooth, husky oil-hydraulic lifting power, at linger-tip control, will reduce fatigue, prevent strain, insure speedy-handling. For illustrated bulletins on Globe Litts, write Globe Hoist Company, Queen & Mermaid La. Philadelphia.

GLOBE HOIST COMPANY

Philadelphia, Pa.

Des Moines, Jowa





Present war production of Oster motors is based on the same sound, thorough engineering which for fifteen years has built the reputation of Oster motor-driven appliances . . . The manufacturer who stands by the

. . . The manufacturer who stands by the performance of his motors on his own equipment is taught in a rigorous school. He knows how to design a motor to fit the job. He has a vital interest in holding production quality up to the standards set by his engineering department.



petus to Brazil's consumer goods industries. The present war, besides expanding the output of existing factories, is speeding up the development of Brazilian basic and capital goods industries. Between 1914 and 1935, the country's industrial output increased by over 500%, an expansion unequaled by any major power except Russia.

Basic Industries Pushed

The bulk of Brazil's manufacturing concerns is established in the go-ahead state of São Paulo and in Rio de Janeiro. Owing to the fact that these concerns are mainly engaged in the production of finished consumer goods-often from imported raw and semifinished materials -Brazil's industrial organization has frequently been regarded as of secondary importance. Now, however, the federal government is actively bent on setting up basic industries-combustibles, iron and steel, light metals, and chemicalswhich not only will make Brazil largely self-sufficient in such products, but also will form the basis for the development of numerous subsidiary industries.

National coal production is now running at about 1,500,000 tons a year, against 490,000 tons a decade ago; the output of industrial alcohol (often used as a fuel substitute) is expected to reach 200,000,000 liters this year, or 40% of normal gasoline requirements; imported diesel and fuel oils are being substituted in larger quantities by vegetable oils; and the exploitation of the country's vast hydroelectric resources is being intensified.

Brazil's iron and steel production practically trebled between 1935 and 1941, reaching 513,000 tons in the latter year. In two or three years, when the new steel mill at Volta Redonda (near Rio de Janeiro) is in full production, this figure will be increased by a further 242,000 tons, sufficient to make the country independent-at the present rate of consumption-of imported plates, sheets, billets, rails, and largely of tinplate. In addition, the iron and steel industry will provide a basis for the expansion of Brazil's incipient machincry industries, which are already turning out agricultural implements, sewing machines, producer-gas engines, and machinery.

Restrictions on Profits?

Considerable progress is being made in the manufacture of light metals. Brazil is drawing up definite plans for the exploitation of her abundant reserves of bauxite, copper, lead, and nickel, for processing these ores, and for setting up industries to turn out finished metal products.

Brazil has nearly 1,300 factories engaged in the production of chemical and pharmaceutical products, paints, dyes, tanning materials, perfumes, candles, matches, explosives, and fertilizers.

Arrangements are being made for the importation of machinery to produce citric acid and for the installation of a large-scale caustic soda industry.

Present-day Brazilian industrialization is being actively pushed by the federal government. The country is planning ahead, determined to retain its hold on the internal market and, if possible, to increase exports of manufactured articles to other South American republics.

Government authorities are studying measures that restrict commercial and industrial profits. No reliable information is available, but it is rumored that the limit proposed is 34% on effectively employed capital, with maximum distribution of profits restricted to 14% (20% being obligatorily credited to reserves). An excess profits tax would swallow up the remainder. Many believe that any measure of this kind would have a very detrimental effect on industrial development, since investment in public bonds still yields any thing up to 9% or 10%.

CANADA

Ottawa's Deal

Steel strike compromise may upset the anti-inflation program and stir up trouble in the labor ranks.

OTTAWA – Concessions to 13,500 striking Canadian steel workers, to obtain resumption of war production, are regarded as another threat to Canada's battered anti-inflation program. Boosting the basic wage rate to 55¢ an hour, the compromise was okayed by Elmer J. Maloy and John Doherty, representatives of Philip Murray's United Steelworkers of America, and C. H. Millard, Canadian director of the union, after negotiations with government cabinet members in Ottawa.

• An Old Issue—Wage increases granted the steel workers were an issue even before Canada's wage stabilization law was enacted (BW-Jul.19'42,p14), and an exception to the ceiling has been sought continually since then.

Two days after local unions received word of the compromise, 5,000 members were back at work. The right to strike in 30 days was reserved pending government action within that period on (1) classification of steel as a national industry and the Trenton, N. S., plant as a basic unit, and (2) further study of industry wage rates.

Application for advances in basic wage rates were made to regional war labor boards in Ontario and Nova Scotia

The familiar Miracle

Look twice. You think you see a negative of two soldiers clashing in bayonet practice. Actually you are looking at sunlight and silver bromide.

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basic war cotia The mysterious action of light on certain silver salts is just as much a miracle today as it was a hundred years ago when the first photographs were made.

Hardly less amazing is the remarkable sensitivity of present-day photographic emulsions.

These new films and papers could

not be manufactured without exacting control of temperature, control of humidity and protection against dust. Air conditioning makes them possible.

Air conditioning and refrigeration play a part in many photographic processes. They are being used to speed up military photography... improve all photography.

Today, air conditioning equipment ... developed by General Electric ... has been made more compact, more

flexible to meet unusual wartime requirements.

After the war, these improvements will result in better air conditioning for offices, stores, theatres, hotels and many other civilian purposes. When the war is won, General Electric will provide this better air conditioning—for a better world.

Air Conditioning and Commercial Refrigeration Department, Division 432, General Electric Co., Bloomfield, New Jersey.

Air Conditioning by GENERAL & ELECTRIC





The wings of the war birds are formed on stamps and presses of which the Chambersburg Cecostamp, designed to form stainless steel and other hard-to-form alloy sheets, is now an important factor. Not only on wing parts, but on ducts, channels, door and window frames and many other sheet metal parts, this easily controlled, rapidly operating tool has made a unique place for itself in the aviation industry.

CHAMBERSBURG ENGINEERING CO. CHAMBERSBURG, PA.



workmen on great drop hammers-

Chambersburg Hammers in many cases.

CHAMBERSBURG

last March. The demand was for an increase in the basic rate to 55¢ an hour. At Algoma Steel Corp. the basic rate has been 45½¢ plus a 5¢ living cost bonus. At Dominion Steel & Coal Co. plants in Nova Scotia the basic rate has been 43½¢ with a 9¢ bonus. Relatively few workers are paid basic rates, and the increase sought involved upping rates for all grades of workers.

rates for all grades of workers.

• Previous Demands Rejected — With approval of National War Labor Board at Ottawa, regional boards rejected the applications last summer on grounds that the wage ceiling law prohibited increases except to adjust out-of-line rates. A commission headed by Justice Barlow subsequently reviewed the Algoma case and refused to recommend a general boost but proposed increases for certain classes of workers and steps towards job reclassification to adjust legitimate claims of relatively low rates.

Algoma opposed the demand originally but stepped to the sidelines when it became a union fight against the wage ceiling law and the labor board's enforcement. The company then negotiated a number of agreements with committees representing groups of workers, which involved adjustments in labor categories and in rates held to be out of line.

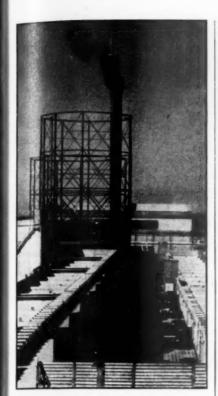
• Permanent Wage Lift—Terms of the settlement satisfy U. S. A. mainly because they set a minimum basic rate which will not be reduced with any drop in the cost of living index and which will stand as a postwar wage floor. The increase in the basic rate replaces cost of living bonuses.

Canadian observers see in the negotiations of Prime Minister King and Labor Minister Humphrey Mitchell with leaders of an illegal strike possible encouragement for other labor groups to defy Ottawa in raids on the wage ceiling.

• Effect on Wage Bonus—More serious consequences are seen in a possible undermining of anti-inflation measures in which Canada took a notable lead. Recent advances in living costs worried Price Control Chief Donald Gordon and Bank of Canada economists to the point where the policy of direct bonusing of retail food prices was adopted. The immediate purpose was to preclude an increase in cost of living bonuses in February. Although the immediate objective is expected to be reached, price control officials are far from confident that present price levels can be held.

that present price levels can be held.

• Watching U. S. Trends—Ottawa also is worried about the uncertain course of anti-inflation policy at Washington. Gordon is watching anxiously for indications of the effect of Leon Henderson's resignation as U. S. price controller. Canadian government labor policy is also influenced by Washington apathy, although moves are now under way for tightening loose joints in the Dominion's Selective Service manpower system.



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There is fire in the furnaces, but storage tanks are still empty at one of Canada's newest chemical works. This time Canada promises not to discard war-born chemical developments, abandoned or dismantled after World War I.

Chemicals at War

With little preparation, Canada has geared explosives output to wartime pace, now is first-line source of supply.

OTTAWA—With the last of ten new projects announced in October now coming into production, Canada's chemicals and explosives plants constitute a major division of the Dominion's war industry and an important source of supply for the United Nations.

• Thousands Employed—Canada now has 38 chemical, explosives, and ammunition-filling plants, 15 of which are classed as major undertakings involving heavy capital expenditure and using many thousands of workers. Three of the major plants are producing explosives, three are filling shells, one is a large fuse-filling plant, and the remainder are chemical producers.

The Dominion's war production heads are proud of what has been done in the chemical and explosives division. The start was virtually from scratch,

PROGRESS
Has No Stopping Point



Progress comes out of experience. But no experience can be more valuable in furthering progress than that gained in a struggle against the lack of progress. That experience brings the kind of development which will meet the demands of progress today—and tomorrow.

It was to meet that challenge of progress that Clare Relays were first "custom-built": For "custom-building", like progress, has no stopping point:

Now Clare engineers have designed a new relay—the Clarette—"custom-built" for mobile applications where dwarf-size and feather-weight are demanded, where ability to control high frequency is imperative, and where resistance to constant vibration and severe shock is essential.

The Clarette measures only $1\frac{1}{2}$ " x $1\frac{1}{2}$ " x $1\frac{1}{2}$ 6" and weighs only 12% ounces. It has no bearings to rattle loose; spring insulators of Mycalex insure minimum high frequency losses; and screws anchoring spring pile-ups to the heelpiece are enclosed in Polystyrene tubes, tightened under pressure, and Glyptol-sealed at head and foot. Can also be supplied with various other types of insulation.

If you will let us know your relay problem, our engineers will "custom-build" a relay to meet your requirements. Ask for the Clare catalog and data book. C. P. Clare & Co., 4719 Sunnyside Avenue, Chicago, Illinois. Sales engineers in all principal cities. Cable address: CLARELAY.



"Custom-Built" Multiple Contact Relays for Electrical, Electronic and Industrial Use

CLARE RELAYS

Business Week • January 30, 1943

The War-and Business Abroad - 37

Bullet-proof windows

Carved from glass

Where ordinary methods of cutting heavy laminated glass are inadequate, this DI-MET Rimlock cut-off blade makes slicing operations easy!

fast-cutting diamond abrasive wheels having exceptionally long operating life. They easily slice hard, brittle materials such as ceramics, porcelain, tile, clay products, vitreous products, glass, quartz, steatite, etc. And cutting operations can be held to close tolerances over a long period of time, a feature that permits easy correction of hard-to-control dimensions commonly encountered in cast or fired ceramic objects.



bonds in sizes ranging from 3 inches to 24 inches in diameter. If you have a cut-off problem, write our engineering department. We will gladly offer helpful suggestions.

MANUFACTURING COMPANY
1112 Border Street, Torronce, California
Menufacturers of
DIAMOND ABRASIVE WHEELS

although plants of Canadian Industries, Ltd., provided a nucleus. Toward the close of the last war Canada was producing the bulk of the shells used by the British armies, but the plants had been scrapped or allowed to deteriorate.

• Crown-Operated-Practically all the units of the present setup are government undertakings, built by government capital and operated by a crown company, Allied War Supplies, Ltd. Capital outlay is more than \$125,000,000.

If all 38 plants were brought together they would cover Montreal. A single project would blanket Ottawa. But most of the big plants are hidden away in secret locations. They are constructed and operated on scientific lines, and there has not been any major explosion disaster in them. Employment amounts to over 60,000.

• Peacetime Research Credited—Important peacetime progress was made by Canadian scientists in the field of chemicals, and this enabled the Dominion to become a first-line source of supply early in this war, turning out practically everything from small arms cartridges to big bombs and depth charges. United States forces are using 50 types of pyrotechnics made in Canada.

A single project worth almost \$20,-000,000, consists of 450 buildings, covers 5,000 acres, and operates its own railroad and trucking fleet. New towns with populations up to 6,000 and 7,000 have been built by Wartime Housing, Ltd., a crown company, to house workers.

• Self-Sufficient—Principal difference in Canada's role in this war lies in her reduced dependence upon imports for components of chemicals and explosives. During the last war nitrate was imported from overseas. Now the Canadian chemical industry obtains all the nitrogen it needs for explosives from the air.

In the last war, most of the sulphuric acid used by Canadian industry was made from imported sulphur. Today, sulphur is obtained from the fumes of Canadian smelters, and more will be produced soon from Canadian ores. Glycerine is produced in Canadian soap factories, and toluol is derived from domestic coking plants.

 Artificial Silk—Canadian chemists have brought wood pulp into use in explosives as a substitute for scarce cotton and silk. Wood pulp replaces gun cotton in cordite, and artificial silk made from the pulp is now used instead of natural silk for the cordite containers.

Munitions and Supply Minister C. D. Howe recently stated that less than 10% of Canada's new war plants would be unsuitable for conversion to peacetime production. It is generally agreed that much of the new chemical and explosives capacity can be turned to peace production and become a permanent division of Canadian industry.

TREND OF BUSINESS CANADA AND U.S. 1929 = 100 CANADA -BUSINESS ACTIVITY 175 150 125 100 STEEL INGOT PRODUCTION 250 150 100 MANUFACTURING EMPLOYMENT 200 175 150 125 100 WHOLESALE PRICES 100 90 CONSTRUCTION CONTRACTS 250 200 150 100 NATIONAL INCOME 200 150 100 1941 1942



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MARKETING

Advertising Holds

Expected losses fail to materialize in 1942, thanks in part to institutional copy. Radio and business papers show gains.

Advertising media men who foresaw their own demise or straitened circumstances at best in the disappearance from the market of automobiles, tires, and electric refrigerators and in the tightening supply of packaged goods like food and cosmetics looked this month at the record for 1942 and forgot that they had ever worried about the gloomy prospects of 12 months ago.

Advertising had pulled through the

Advertising had pulled through the year only slightly behind 1941. True, this was the first year to show a loss since war entered the equation back in 1939. But a drop of 5.4% in total newspaper linage and a slip of 2% in total magazine and farm paper revenue balanced by 8%–9% gains for both radio networks and business papers prove conclusively that advertising is in no sense a war casualty.

in no sense a war casualty.

• "Institutional" Comes Through-Institutional advertising is credited with saving the day-to the surprise of all, including its most enthusiastic promoters (BW-Jan.24'43,p38). Agency men, used to hard-selling copy themes that are needed to create markets for new products and maintain brand preferences for old ones, couldn't believe that goodwill advertising would ever amount to much-at least, not enough to compensate for the space and time commissions they could no longer earn on durable consumer goods accounts. But this year industry has kept its trademarks burnished.

For example, campaigns basic to postwar automobile sales got under way via million dollar radio programs by both Ford and General Motors (BW-Jul.4'42,p69). Industry-wide salvage campaigns rolled up impressive revenue totals—\$2,500,000 for the scrap metal and rubber drives alone (BW-Jun.2'42,p20). And explanations of shortages, rationing, and product changes stimulated new campaigns constantly.

• Government's Assistance—In Great

• Government's Assistance—In Great Britain, where newspaper advertising has dropped 40% since the beginning of the war in 1939, the government has become No. 1 advertiser (BW-Feb.14'42,p54). Here the U.S. government is no buyer of space and time—not at least to amount to anything; it even leaves promotion of war bonds up to manufacturers and retailers. But advertising interests still owe a measure of

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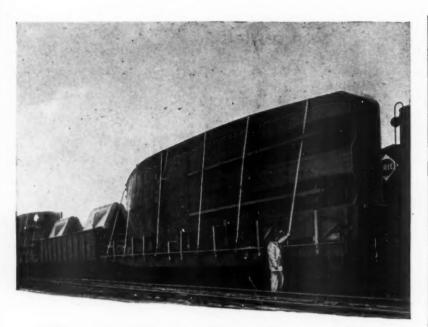
STREAMLINED against enemy fire, with hard-hitting 75 s to clear the road ahead, the automobile industry's "new models"... tanks, guns, and many other war products . . . are streaming off the assembly lines by the thousands.

It took a lot of skill and organization to make this possible in one short year. Among the problems of war production are the many lubrication problems which we of The Texas Company help to solve.

With quality industrial lubricants available at more than 2300 wholesale supply points and specialized engineering service available across the nation, the Texaco organization gives skilled help on any lubrication problem - quickly.

THE TEXAS COMPANY

-in all 48 States



Remember the Man who Built a Boat in his Basement?

He's using it now from Suez to the Solomons

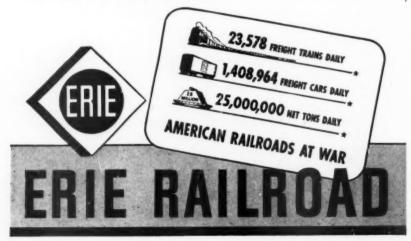
IT'S an old story—about the man who built a boat in his basement and then couldn't get it out.

Recently our Army and Navy and Marine Corps had a similar problem. But they found the answer, too.

For example, huge invasion barges, big enough to carry 50 men and a tank, were built far inland, traveled to sea by rail. The broad, high clearances of the Erie made possible the construction of these boats hundreds of miles from the ocean.

And they make possible the rail handling of all manner of oversize shipments from coast defense guns to tanks—shipments which couldn't be handled speedily in any other way.

Whether the job is moving invasion barges or troop trains, every railroad man is doing his darnedest these days. For we railroaders believe in America, believe it is worth fighting for. And we're going to stay on the job until this war is won, and after—to help rebuild the world.



thanks to Uncle Sam for the fact that their business almost held its own last year.

No final clarification of advertising's status in negotiating or renegotiating war contracts was made until the third quarter, but individual rulings throughout the year had hinted strongly that a "reasonable" expenditure for advertising would be an admissible item of cost. And that eased the pressure materially.

Advertising found relief also in the Treasury rulings. Although this department's sole concern is that advertising shall not be used to avoid taxes, the Collector of Internal Revenue allows deduction of "ordinary and necessary" expenditures specifically including institutional or goodwill advertising directed to "public patronage which might reasonably be expected in the future" (BW-Aug.29'42,p5).

• Proof of the Pudding—The effect of

• Proof of the Pudding—The effect of the government's final rulings about advertising costs in October (BW—Oct. 17'42,p74) was most clearly evident in the daily press, for magazine and radio campaigns are generally booked weeks or months in advance.

The general classification of newspaper linage (national product advertising, exclusive of automotive) was up 1,772,215 lines or 8.9% in November over the same month in 1941 according to Media Records which tabulates advertising lines in 60 daily and 93 Sunday newspapers in 52 cities. In December the increase was 12.3% or 19,147,290 lines compared to 17,047,358 in the last month of 1941. These months brought general newspaper advertising for the year over into the black by a margin of 1.3%.

Although November and December increases probably were inflated by contracts held up pending actual issuance of the final rulings, they nonetheless dramatize a trend that advertisers believe will continue this year.

• Other Classifications Off-Otherwise, the daily press fared sadly in 1942, losing linage in all other classifications. What really knocked the bottom out of revenue was a 52.5% drop in automotive linage, which back in the prewar years accounted for a sixth of the total. Retail advertising was off 3.4% and department stores dropped 2.2%-this despite the fact that 1942 with sales of \$56,000,000,000 was the biggest year in retailing history, 3% over 1941, 331% over 1939 (BW-Jan.23'42,p43). Financial advertising fell off 13.9%; classified, 5.6%. The net of it all was a decline in total newspaper linage of 5.4%. Mounting shortages of goods spell increasing trouble for newspapers in the all-important retail classifications. • Radio, Trade Papers Up-Brightest spot in the picture is that made by radio networks with revenue gains of 9% last year. Mutual and the Blue, 5 WAYS TO GET

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SUES SUES FOR \$10,000

It was only a small patch of ice on the sidewalk, but Mrs.———of New York State valued her injuries at \$10,000 when she slipped. It would have meant financial loss and courtroom headaches for the property owner, but thanks to a public liability policy with U. S. F. & G. the owner was protected and relieved of trouble and expense. You may get a jolt if someone is injured on your premises and sues you for damages.



SMASHED BY CAR

The shopkeeper wasn't pleased to have an automobile in his display window . . . because it had skidded in, out of control. But within 24 hours U.S. F. & G. had replaced the broken . . . but insured . . . glass. The life of display windows averages 8 years, and the cost of plate glass has been rising. You may get a jolt if your plate glass windows are smashed . . . and not insured.



CAUSES 30 CLAIMS

Pity the poor tailor! Not only was his shop burglarized, but he was faced with 30 irate customers demanding full value for their stolen clothes. Fortunately his burglary insurance with U. S. F. & G. paid all of the claims. Today, with crime on the increase, you may get a jolt in the pocketbook unless you are adequately insured against burglary, robbery and similar hazards.



EMBEZZLED \$34,500

When a shipping clerk turned salesman, stealing merchandise and selling it, he cleared \$34,500. His employers were only partially covered, having failed to take the amount of fidelity insurance recommended by their U. S. F. & G. agent. So the partly insured employers had to assume a large portion of the loss. If war is making you use new and untried workers, you may get a jolt unless you review your insurance in the light of today's conditions.



EXPLODING BOTTLE

Just three days after he mailed his U.S. F. & G. agent a check for the premium on a new \$10,000 accident and health policy, a ginger ale bottle exploded, completely blinding the insured in one eye. The U.S. F. & G. paid the claim. You may get a jolt from injury or illness unless you carry adequate accident and health insurance.

Agent or Broker—as you would your Dector or Lawyer

one local U.S.F.&G. agent places at your disposal knowledge of insurance and how to use it—plus on the spot service in the payment of losses. He will be glad to make a Graphic Audit of your present insurance program—to help you guard against wartime risks which make an insurance audit imperative. Your U.S.F.&G. agent is one of thousands serving communities great and small throughout the United States, its possessions, and Canada. Consult him today.

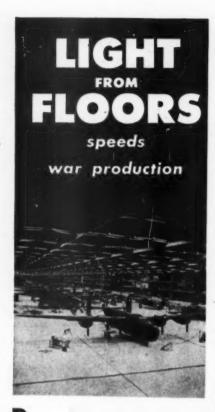
U.S.F.&G.

UNITED STATES FIDELITY & GUARANTY CO.

PIDELITY & GUARANTY PIRE COMPORATION

House Officer

Bullimore, Md.



ARK FLOORS waste light by absorbing it. White cement floors save light by reflecting it. The advantages of making giant reflectors of your factory floors are shown by installations at Boeing, Consolidated, Douglas and North American Aircraft plants. In the Consolidated plant at Fort Worth, tests by General Electric show that the white cement floor which adjoins a gray cement floor in the same plant reflects 61% more light to under side of wings and 20% more light to vertical work surfaces.

Light-reflecting floors made with Atlas White cement have many other advantages. They encourage cleanliness, are easy to maintain, reduce disturbing shadows, give workers better and more comfortable light, improve morale, increase production, and reduce accidents, errors and spoilage.

Send for new book, "Light From Floors." It tells the complete story of light-reflecting floors made with Atlas White cement. Write today. Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York City.



National Advertising Media: 1942 vs. 1941

INES ¹		
1942	1941	% Chan
\$46,047,034	\$46,564,996	- 1
11,501,933	12,523,409	- 8
13,634,288	16,494,080	-17
106,568,556	104,955,159	+ 2
\$177.751.811	\$180,537,654	- 2
APERS1		
\$10,309,520	\$10,547,435	- 2
RADIO ²		
\$15,782,493	\$12,858,169	+23
45,593,125	44,584,378	+ 2
9,636,122	7,300,955	+32
44,393,063	(est.) 41,398,528	+ 7
\$115,404,803	\$106,142,030	+ 9
AND CLASS	PAPERS ⁸	
P		er cr
		% Change
		+12
		-13
8,126	8,445	- 4
139,060	128,777	+ 8
PERS'		
52 Cities)		
		% Change
196,653,436	194,052,658	+ 1
26,823,244	56,444,567	-52
	### 1942 ### 1,501,933 13,634,288 106,568,556 ### 177,751,811 ### APERS1 ### \$10,309,520 ### RADIO2 ### 15,782,493 ### 4,393,063 ### 15,404,803 ### AND CLASS ### 1942 ### 14,020 ### 14,020 ### 139,060 ### 14,020 ### 14,020 ### 14,020 ### 14,020 ### 14,020 ### 14,020 ### 14,020 ### 14,020 ### 139,060 ### 14,020 ### 14,020 ### 14,020 ### 14,020 ### 15,053,436	1942 1941 \$46,047,034 \$46,564,996 11,501,933 12,523,409 13,634,288 16,494,080 106,568,556 104,955,159 \$177,751,811 \$180,537,654 APERS¹ \$10,309,520 \$10,547,435 K RADIO² \$15,782,493 \$12,858,169 45,593,125 44,584,378 9,636,122 7,300,955 44,393,063 (est.) 41,398,528 \$115,404,803 \$106,142,030 AND CLASS PAPERS³ Pages of Space 1942 1941 116,914 104,220 14,020 16,112 8,126 8,445 139,060 128,777 APERS¹ 52 Cities) 1942 1941 196,653,436 194,052,658

223,476,680

† Similar audited figures for outdoor, display, direct mail, not available.

1 Space and dollar volume figures, supplied by Publishers' Information Bureau, are based on one-time card rates and, therefore, do not include space and time discounts.

2 Figures for the Blue, Columbia, and Mutual networks were supplied by the companies themselves. Total for NBC was estimated by subtracting the total of these figures from the total for all network radio as published by Variety.

1 Figures supplied by Industrial Marketing.

4 Figures supplied by Media Records, Inc. During the same period, n.n-national advertising in the 52 selected cities fared as follows: Retail advertising, 743,260,711 lines (down 3.4% from 1941); financial advertising, 17,622,549 lines (down 13.9% from 1941); and dassified advertising, 257,311,594 lines (down 5.6% from 1941). Total newspaper advertising showed a 5.4% drop in 1942 as against 1941.

the two youngest networks, showed walloping increases of 32% and 23%, respectively, while Columbia scored a modest advance of 2% and NBC an estimated 7%. (No official figures were released by NBC.)

Total....

Radio sells time, and individual networks are beginning to find that the 24-hour day inevitably imposes a ceiling on business. Mounting popularity of radio as an advertising medium is supported by larger audiences, particularly since gas rationing became effective. Increased emphasis on news broadcasts and commentators boosted listenership particularly between 5 and 7 p.m.

Business and technical publications, increasingly important to their readers as war complicates production and distribution, came through with the expected gain in revenue-a solid 8%.

• News Magazines Score-As a class, national magazines are not likely to mark 1942 down as a banner year. Ups and downs within the field have been spectacular, reflecting the advertiser's increasingly selective use of all media.

By all odds the biggest ground gainers were the weekly news magazines. In order of total revenues, their gains

stacked up like this: Time, 12%; Business Week, 44%; Newsweek, 36%; U. S. News, 65%. Weeklies, as a group, according to figures of the Publishers Information Bureau, showed an advance of only 2%. Life (up 11%) at last usurped the traditional position of the Saturday Evening Post (down 16%) as the No. 1 revenue producer in the field; comparative dollar figures were \$27,369,394 and \$23,653,121. Only spectacular loss of ground among the weeklies was that reported by Liberty-down 45%.

250,497,225

Among the monthlies, the general fiction magazines were the top performers (up 8%), as the war put a premium on escapist literature. The socalled special group of magazines, principally luxury magazines and hard-hit outdoor and sporting books, ended up the year with a 17% loss in dollar volume. Only exception in the classification was Fortune with a gain of 23%.

Farm papers, with Country Gentleman still in the No. 1 spot, reported an average loss of about 2%. Only poultry journals showed sizable gains.

• To the Ladies-The Ladies Home Journal, which took the revenue lead in the women's field away from Good Housekeeping last year, held on to the top spot this year with an 8% increase. Woman's Day, published by the Great Atlantic & Pacific Tea Co. and sold only in A. & P. stores, increased rates last year and pushed receipts up 43% over last year while increasing space sales by only 2%.

Other publications aimed at women in middle and lower income brackets—even movie magazines which are supported by low-price cosmetic advertising—came out much better than the swankier women's magazines. Vogue and Harper's Bazaar showed substantial dollar losses, 20% and 16% respectively. The women's group as a whole averaged

a revenue loss of 1%.

Outdoor Advertising, Inc., reports gross billings in its field of \$32,000,000 last year, a 19.4% drop from the \$39,700,000 realized in 1941. Observers feel this is only the beginning of the blank billboard era outside Metropolitan areas, since inevitably outdoor advertising in these areas is related to travel

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• Looking Ahead—Although Treasury and WPB rulings give assurance that normal advertising expenditure can be continued for the duration, they don't guarantee that it will be. The future of advertising seems to depend, like everything else, on how long the war lasts. The longer the war, the greater the scarcity of consumer goods, and advertising volume probably cannot flourish long in such a constricted economy. Institutional advertising alone cannot be counted on to bulwark the publishing business indefinitely.

What looked like the biggest blow of the war to a good many publishers-WPB's order reducing paper consump tion by a flat 10% for magazines (BW -Jan.9'43,p44) and by a varying amount averaging about 10% for newspapersmay yet prove to be a blessing in disguise, so far as it may force more efficient operation and thus contribute to an increased net-or a reduced loss. Led by Time and Life, which announced last fall that they were limiting the size of their issues and were prepared to decline advertising, a good many magazine publishers whose business has been expanding rapidly have long been weighing plans to ration space, plans that will surely be put into practice if the expected second 10% cut-and maybe a third-materializes. And what worries these publishers also worries a good many advertisers who depend heavily upon the printed word in tested media to sell branded products in a highly competitive market. As for the less fortunate publishers, the papercut order is a blessing with little or no disguise. They're already standing outside the transoms of the favored few, waiting for advertising contracts to come over on a reverse trip.



Enlarged reproduction free on request

Servant of Freedom

This mighty servant is now helping to crush the Axis. With victory, Reinforced Concrete will resume its place in America's march toward all Freedoms.

Already America's vast network of reinforced concrete highways, bridges and airports is helping to free men from barriers of distance, time and transportation costs—opening up the fuller life. Massive concrete dams are making low-cost electricity available to more and more millions—lifting old burdens. Concrete water supply and sanitation systems are contributing to greater health. On farms and in

cities, beautiful, enduring concrete by its permanence and lasting economy is making American life better.

After victory over the Axis, reinforced concrete "dream" homes, and concrete construction of all kinds, will again serve in bringing freedom from want and from fear.

* * *

Much of America's concrete is reinforced with Wickwire Spencer Steel's Welded Fabric, to help Concrete achieve its maximum strength with greatest economy. Famous, long-lived Wickwire Rope, Perforated Metals, and Wire Cloth also serve the industry in mines, quarries, cement mills, and in construction. Wickwire Spencer Steel Company, 500 Fifth Avenue, New York, N. Y.

WICKWIRE SPENCER STEEL COMPANY



COPYNIANT COAS. WIGHWAIT SPENDER STEEL COMPANY



Taking swift advantage of new battle techniques and weapons is winning the war. We can be thankful our strategists on land, sea, and air are alert, open-minded, and resourceful.

Those same qualities are also winning on the production front. Production generals have quickly adopted the Atlas idea of "match the machine to the job." Big machines for big jobs—modern, fast precision tools for small-parts production so capacities of larger machines will not be wasted—is the order of the day. One example is the Atlas Drilling Machine. It saves days of production each month on parts that require a series of drilled and



tapped holes. It is capably handling operations that formerly took special machines costing thousands of dollars. There are 2, 3, and 4 spindle models. We will welcome an opportunity to tell you more about them.

ATLAS PRESS COMPANY

185 N. Pitcher St.

Kalamazoo, Michigan







MILLING MACHINES

AMONG Atlas, CUSTOMERS ARE:

General Motors
Corp., (Continued)
Detroit Transmission
Fisher Body
Frigidaire
GM Products of Canada

GM Truck and Coach Grand Rapids Stamping Olds Motor Works Packard Electric Pontiac Motor Pontiac Motor Division Saginaw Steering Gear Ternstedt Manufacturing B. F. Goodrich Company Goodyear Aircraft Corp. Grumman Aircraft Engineering Corporation

Advertising Audit

Business and industry is behind research into postwar promotion outlook. N.I.C.B. study to cost \$200,000.

American business presumably had the last word on advertising a year ago when the Association of National Advertisers and the American Association of Advertising Agencies jointly sponsored a four year research conducted by Neil H. Borden of the Harvard Business School and culminating in a four-pound volume entitled The Economic Effects of Advertising (BW-Jan.3'42, p34). At least both the trade and its critics had 1,028 pages of detailed and statistical text defining advertising's role in our national economy.

• Protected from Critics—But last week,

• Protected from Critics—But last week, industry already had contributed \$60,000 toward a fund of \$200,000 to be turned over to the National Industrial Conference Board for The Advertising Study—Reconstructing the Consumer Market After the War. Policies are designed to protect the project from such criticism as the Borden study incurred.

For one thing, an additional \$200,000 will be spent in publicizing results of the research so that it won't suffer from the disuse that has been the Borden study's lot. For another thing, in the solicitation of funds the sponsors have focused their attention principally on advertisers, who have a hard cash interest in knowing what kind of a job advertising can do, rather than those who live exclusively from the sale of advertising. Agencies, for example, are pointedly ignored in the fund drive.

• A \$2,000,000,000 Audit—The leading sponsors—General Mills, American Cyanamid, American Telephone & Telegraph, General Foods, the New York Times, Chicago, Burlington & Quincy Railroad, General Motors, National Broadcasting Co., etc.—say the study aims to examine advertising as a basic tool of our economy, to find out what is accomplished by the expenditure of about \$2,000,000,000 a year.

The conference board estimates the job can be done in six to eight months but has not indicated its proposed techniques. The study proposes to measure advertising in its relation to technological development, distribution of consumer goods, consumer credit, support of press and radio, employment, productive expansion, total national consumption (standard of living), per capita use of staple commodities and specialties, distribution of family income between consumer goods and savings (also between necessities and luxuries).

 Cost-\$1,000 Each-The wide range of contributors-major businesses participate at the rate of \$1,000 each, while some small newspapers have sent in unsolicited contributions ranging upwards from \$20-promises an unbiased report.

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Skeptics, however, suspect that individual backers have something less theoretical in mind. With advertising space limited by a paper shortage, critics suggest that industries which still have a product to sell are anxious to pile up evidence that might give them a priority over the now prevalent institu-tional, or "good will," advertising (BW-Jan.17'42,p45).

Mail Order's War

Catalogs of big houses haven't shrunk, but they offer many more soft goods and their furniture sections bulge.

New spring and summer catalogs issued this week by Chicago mail order houses reflect the war economy in two important respects: Soft lines are expanded to fill in for war-restricted durable goods, and there's an increased emphasis on medium- and high-priced articles rather than on bargains.

• Items That Get More Space-Wearing apparel and soft domestic lines, such as dress goods, draperies, and blankets, take up 18.5% more space in the Sears, Roebuck & Co. catalog than they did in the corresponding book of a year ago, although the total number of catalog pages (1,232) is about the same. The 20% increase in size of the Montgomery Ward & Co. catalog is devoted largely to soft goods, except for a healthy promotion of the "Hallmark" furniture, line. In the Chicago Mail Order Co. book (slightly larger than last year's), yard goods enjoy 40% more space than they rated formerly.

The indexes tell the story. Rather than confuse customers and cause unnecessary correspondence, the index in both Ward's and Sears's books lists all the items usually carried, but an asterisk designates those no longer offered because of the war. These items range from accordions to wire hair pins and number about 140 for Ward, 225 for Sears. In Ward's catalog, still other items that became scarce in the six weeks required for printing the catalog are stamped "Not Available."

• For the Ladies-All of the Big Four mail order houses (Spiegel, Inc., is the fourth one) expanded their lines of women's and girls' clothing, with emphasis on practical rather than frilly garments. A Sears innovation to assure more satisfactory fit is a new system of measuring, based on a recent U. S. government survey of thousands of women's measurements, in which the customer determines her size by hip



Miss J's head is buzzing with Priorities, Production, Personnel, Inventory and Purchasing Records. The office force is about to mutiny. There's too much running around to get the facts, and there's no help in sight.

Mr. L. is in a dither, too. He never has information on hand when he needs it.

Plenty of executives have found the answer to this problem. They have discovered how to accomplish twice as much record-keeping in half the time with fewer personnel.

They've learned that VISIreford, "The World's Fastest Visible Record Keeping System," saves



TIME . LABOR . SPACE

Write now for Booklet 56, "Keep These Vital Records Up to the Minute."

VISIBLE INDEX CORPORATION 535 Fifth Avenue, New York, N. Y





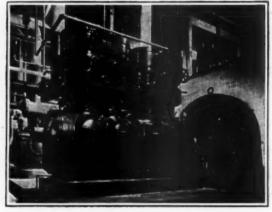
PRICK STEAM ENGINE, BUILT 1856 NOW IN THE FORD MUSEUM



FRICK REFRIG. MACHINE OF 1883

90 Years' Engineering Experience Stands Behind





To be within ten years of its One Hundredth Anniversary is a distinction enjoyed by very few companies in America.

Frick Company was established in 1853 for the building of steam engines. The success of these led to the construction, in 1882, of the first Frick Refrigerating machine.

Today, Frick cooling systems are put into war service as fast as they can be made. Tomorrow, you can get the advantages of up-to-date Frick Refrigerating, Ice-making, and Air Conditioning Equipment, backed by more than 90 years' experience.

FRICK COMPANY, WAYNESBORO, PENNA, U. S. A.





VACUUM-WITH PAPER

Coffee will be vacuum packed—without metals. Owens-Illinois Glass has a method utilizing a paper-andadhesive cap that present machines will handle.

measure rather than by bust measure.

Sears makes a bid for war workers' trade by offering a new line of women's work clothes, including special shoes and a brand new foundation garment "designed for active wear support." Men customers are beguiled away from the traditional work shirt-on which pressure has been unusually heavy of late-by a new knit line of work shirts. Sears points out that because they cling to the figure, knitted shirts are less likely to be caught in moving machinery.

• Sheeting Is Restricted—Not all soft lines are plentiful. All four houses show white cotton sheeting with the explanation that temporarily the government has commandeered the output of their mills (BW-Jan.9'43,p34) so "please don't order until Apr. 1."

The trend toward medium-priced and higher-priced merchandise is especially noticeable in such durable goods as are still offered. Hardware is of professional quality to appeal to war workers accustomed to handling high-priced tools. Many of the less expensive tools have been dropped in order that metal formerly used in them could go into production of quality hardware. Priority forms are provided for customers who order such items as threading tools, precision instruments, and metal working lathes.

• Splurge in Furniture—Sears's furniture section is the largest in its history—24 more pages than a year ago. Upholstered furniture features new wooden springs (BW—Dec.26'42,p44).

Most startling of various lines introduced to supplement big-ticket goods restricted by war is Sears's full-page promotion of tombstones. Long a Sears item, tombstones have never before been in the general catalog.



• A vital chemical of war is "powdered daylight" – fluorescent powder that makes cool, glare-free, shadowless light to speed production in plants throughout America.

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Complex compounds called phosphors are pulverized, refined and milled to the fineness of face powder. Precisely blended and mixed with binders to assure even coating, tiny phosphor particles are fixed inside the glass tube by high-temperature baking. There, in very low-pressure argon gas and mer-

cury vapor, the "Black Light" magic of ultra-violet rays transforms phosphor energy into visible light more constant than daylight — and just as kind to the human eve.

More than ten years of independent research have made coatings with smoother textures a unique feature of Sylvania Fluorescent Lamps. They have also brought other points of Sylvania Lamp superiority: uniform colors, higher light output and longer life – at progressively lower costs.*

Improvements take place every week at Sylvania. Many of them, like the "Mercury Bomb," conserve strategic materials and labor, and at the same time improve quality. All of them serve fluorescent progress, which is aggressively aimed to bring better lighting to industry, commerce and the home when Victory is won.

While today's Sylvania Fluorescent Lamps are serving three-shift days in America's war plants, tomorrow's are being made even better. Specify Sylvania Fluorescent Lamps for replacement and be assured of all the improvements offered by constant research.

FAR MORE LIGHT AND LIFE FOR YOUR MONEY

*Compared with 1939 a dollar invested today in Sylvania Fluorescent Lamps buys more than four times the lumen output and approximately five times the lamp life.

SYLVANIA FLUORESCENT DOLLAR BUYS:





(Based on decreasing price and increasing efficiency and durability of Sylvania 40-Watt White Fluorescend Lamp)

> Even on existing circuits, a change-over to fluorescent— Sylvania Lamps, Fixtures and Accessories—will probably more than double the light you get for the same wattage.



SYLVANIA

ELECTRIC PRODUCTS INC.

formerly Hygrade Sylvania Corporation Salem, Mass.

Incandescent Lamps, Fluorescent Lamps, Fixtures and Accessories, Radio Tubes, Electronic Devices.

Power-Giant Arm of Production

Ninety Per Cent of American Industry Is Electrified

ELECTRICITY is the mainspring that turns the wheels of our factories, mills and mines. It is the tireless arm that grinds our grain, weaves our cloth, pumps our water, builds our planes, our guns, our ships, our cars, our trucks and tanks . . .

The mighty Pharaohs had less energy at their disposal in building their pyramids than is generated to-day by one single power plant. The combined capacity of America's central power systems is without parallel in the history of the world . . . 46 million kilowatts, i.e., 65 million horsepower in steam turbines, hydro turbines and other prime movers. That is more power, day in and day out, than 650 million slaves could produce—for a limited time—minutes in fact.

The capacity of this vast fountain of energy is beyond the grasp of the average man who flips a switch and sets in motion machines that perform the labor of a thousand man-hours in a matter of minutes. Perhaps

only the old time farmer, whose traditional source of power is a team of tired horses and a pair of calloused hands, knows how to appreciate this commodity that is so vital an ingredient of everything we consume and use.

Yes, we take electricity for granted. We expect it to appear in unlimited quantities, like water and air, as we need it. Almost as essential as these two elements in times of peace, it becomes a matter of life

and death in times of war. Industry would collapse without it and the nation would quickly perish.

With the catastrophe of Pearl Harbor a little over a year ago, came the realization that we had to outproduce our enemies. To out-produce our enemies, who had a seven year head start, meant to turn more wheels than they were turning and to turn them faster than they were turning them.

New plants sprung up overnight. Production in-

creased beyond our wildest dreams. Aircraft and ship-building surpassed the most daring forecasts. The machine tool industry's output grew to a volume that bordered on the miraculous. Guns, shells, uniforms, shoes, tanks and a thousand other items were being made in hitherto undreamed of quantities. All of them have one common essential ingredient — power. Industry demanded power — more and more power!

It is no small tribute to the power industry that, while other raw materials developed shortages necessitating strict priorities control, electricity remains unrationed — no priorities, no curtailments, no rate increase. Current industrial consumption is running 16 per cent over 1941 and 50 per cent over 1940. Not spectacular perhaps but when we consider that the nation's 26 million domestic consumers utilize only about 14 per cent of the energy output, we begin to get some idea of industry's power consumption.

Our power companies might have been stunned by the prospect of mounting demands for kilowatts. Instead they set about developing and coordinating a multiplicity of relatively small and seemingly unrelated factors. Individually or even collectively, these have not been of a spectacular nature. Certainly they have not inspired the award of the Army-Navy E although they are an essential ingredient in every Army-Navy E that has been

awarded to American industry.

The contribution of the power industry to the winning of the war is not likely to flame forth in newspaper headlines. It takes the more prosaic turn of portraying an industry that is doing wonders quietly, unobtrusively.

At the close of the last war the power at the disposal of the American industrial worker averaged 3½ horse-power. At the beginning of this war, twenty years later,

This is the seventh of a series of editorials appearing monthly in all McGraw-Hill publications, reaching more than one and one-half million readers, and in daily newspapers in New York, Chicago and Washington, D. C. They are dedicated to the purpose of telling the part that each industry is playing in the war effort and of informing the public on the magnificent war-production accomplishments of America's industries.

it had increased to 6½ horsepower. What other nation can even approach that figure? This large provision of power is the achievement of the electric utility industry. For years it had built and applied its equipment to the highest standards of performance and operated its systems to equally high standards of service and dependability. Always recognizing that "public service is a public trust" it had maintained wide margins of security in performance. Today these margins are the source of the power industry's ability to rise to the emergency.

In short, the electric utilities were prepared!

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Power men are accustomed to looking ahead, to prepare for growing loads and allow for unforeseen contingencies, for electricity cannot be stored. It is "ordered" by touching a switch. It is delivered and consumed at the same moment.

Months before the actual outbreak of hostilities foresighted power men set to work computing how much life of equipment could be risked in the process of crowding it toward greater output. Generators, boilers, turbines, cables, transformers and even conductors underwent close scrutiny in an effort to increase the load — safely. They figured, they experimented, they tried untried measures.

Insulation, for example, is the crux — the least known component of electrical apparatus. When it lets go the service suffers. It is not easy to know how near any bit of crucial insulation is to letting go. It takes courage to work it to a point just short of failure . . . but that is exactly what is being done today.

Technological forcing of equipment, however, is not all of the story. Obsolescent equipment has been rehabilitated; salvage has been intensified; critical metals have been replaced by non-critical materials; water sprays, air-blowers and other cooling methods have been installed to keep over-loaded apparatus from over-heating. Nothing has been overlooked. Ingenuity has contrived the well nigh impossible.

Hand in hand with these measures of expediency have gone measures of intensification. Hydrogen pressure for cooling generators has been stepped up from ounces to pounds taking more heat away from the machines and enabling them to carry greater loads. Capacitors—little more than aluminum foil interleaved with thin paper—have been applied by the carload relieving the systems of that mysterious reactive current which is associated with that equally mysterious power factor. They have performed wonders in avoiding the need for additional generating and transforming equipment. The use of portable sub-stations has averted the otherwise necessary reserve capacity in fixed installations at many points.

When coal was placed on the urgent list last spring

the electric utilities outstripped all other industries in providing storage for the winter. Stocks on hand the first of October were sufficient for 105 days, or more than twice what would be considered adequate in times of peace.

When staff losses to the armed forces became serious power companies contrived measures that enable them to get along without aggravating the national manpower situation by hiring others to replace them. Today meters are being read every two or three months instead of monthly; women are being trained to do drafting, keep the logs in power plants and sub-stations and to test meters in shops and laboratories.

On the summit of "Grandpa's Knob", a mountain overlooking Rutland, Vermont, stands a giant wind-mill that would have been the delight of Don Quixote. Towering 200 feet above the tree tops its mighty 175 foot propeller turns with the wind and drives a 1,000 kilowatt generator which feeds its output into the Central Vermont Public Service Corporation's power system. The most ambitious wind-turbine generator in the world, and a daring experiment of forward-looking men.

Today everything electrical is being tried; is being worked harder than it has ever been worked before.

Great credit is due the men behind the electric power industry. These men have recognized the responsibility of their jobs—it is a part of their very being. Theirs is the kind of service that must be maintained. No soldier is truer to his trust than is the employee of this great industry.

The service must go on! No matter what happens — acts of God or deeds of men — the service must go on! Labor disturbances may disrupt other industries but there have been no shutdowns due to labor trouble in electric power plants since Pearl Harbor.

And this winter when blizzards pile up drifts and sleet makes pavements slippery there may be absentee-ism from other plants but the utility employees will be on the job ready to climb the ice-covered poles and repair the ice-laden lines whenever the call comes.

In this war the least costly yet the most precious element of production — electricity — will be ever ready to "man" the machines that will produce the weapons that will give victory to the forces of freedom.

Sames H. W. haw. N.

President, McGraw-Hill Publishing Company, Inc.



No clock watcher

OURS mean nothing to the 'Load Lifter' hoist. Twenty-four hour shifts are becoming routine jobs for this tough, versatile hoist. Whether the load is 500 or 40,000 lbs. there is a 'Load Lifter' exactly right, designed and built to endure the most grueling assignment even war production can give it.

It differs from all other hoists in the number of special features among which are:

- 1. "One-point" lubrication.
- 2. Roller Bearings and Ball Bearing Motor,
- Safety upper stop; lower blocks; sure brakes.
- 4. Two-gear reduction drive; sealed against oil leaks.
- 5. Steel interchangeable suspension.

'Load Lifter' electric hoists are built with lifting capacities of 500 lbs. to 40,000 lbs. in all combinations required for industrial lifting necessities. They are adaptable to almost every working condition within their capacities. Send for Bulletin 350.



'LOAD LIFTER'

MANNING, MAXWELL & MOORE, INC.
MUSKEGON, MICHIGAN

Builders of 'Shaw-Box' Cranes, 'Budgit' and 'Load Lifter' Hoists and other lifting specialists, Makers of Ashcroft Gauges, Hancock Valves, Consolidated Safety and Relief Valves and 'American' industrial instruments.





WAR BUSINESS CHECKLIST

A digest of new federal rules and regulations affecting priorities and allocations, price control, and transportation.

Grade Labeling

Standardized grade labeling of canned grapefruit juice has been made compulsory by OPA Regulation 306, the first of a series of predicted actions whose purpose is to cover the entire 1943 pack of fruits and vegetables (page 18).

Bathrobes

Bathrobes and other types of lounging wear, including beach coats, housecoats, negligees, lounging robes, and lounging pajamas, may now be made of all-wool fabrics, of which 65% may be new wool, and the rest reclaimed or reused wool. Problously use of wool in such garments had been completely prohibited.

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Textile Print Rollers

WPB has prohibited the use, after Feb. 15, of copper textile print rollers that were idle in the hands of producers for the entire twelve months ended Sept. 1, 1942. Such rollers, or an equivalent poundage of other rollers, must be sold either to a brass mill or to the Metals Reserve Co. for copper reclamation. The order also freezes all such rollers held by dealers and permits their sale only for reclamation. More than

National Supply Co. Toledo, O.



Alliance Structural Co., Alliance, O. Babcock & Wilcox Tube Co. Beaver Falls, Pa. Batteryless Telephone Equip-ment Co. Pittsburgh, Pa. Bethelehem Steel Co. Baltimore, Md. Bison Shipbuilding Corp. North Tonawanda, N. Y. Borg-Warner Corp. (Two divisions) Burroughs Wellcome & Co. (U.S.A.), Inc. Tuckahoe, N. Y. Chicago-Latrobe Twist Drill Works Chicago, Ill. Clark Equipment Co. Battle Creek, Mich. Columbian Steel Tank Co. Kansas City, Mo. Consolidated Steel Corp., Ltd. Orange, Tex. Copco Steel & Engineering Co. Detroit, Mich. Crouse-Hinds Co. Syracuse, N. Y. Darby Products of Steel Plate Corp. Kansas City, Kan. Daytona Beach Boat Works Daytona Beach, Fla. Eclipse Counterbore Co. Detroit, Mich. Edison-Splitdorf Corp. West Orange, N. J. Edwards & Co. Norwalk, Conn. Electric Products Co. Cleveland, O. Elliott Co. Jeannette, Pa.

A. D. Ellis Mills, Inc.

Monson, Mass.

Engineering Research Corp. Riverdale, Md. Farrell-Cheek Steel Co. Sandusky, O. F. Ferguson & Son Hoboken, N. J. Foote-Pierson Co. Newark, N. J. Fulton Sylphon Co. Knoxville, Tenn. General Electric X-Ray Corp. Chicago, Ill. General Motors Corp. (Three divisions) General Radio Co. Cambridge, Mass. Ilg Electric Ventilating Co. Chicago, Ill. Illinois Gear & Machine Co. Chicago, Ill. D. O. James Mfg. Co. Chicago, Ill. Lindberg Engineering Co. Chicago, Ill. Markey Machinery Co., Inc. Seattle, Wash. Masonite Corp. Laurel, Miss. Mathieson Alkali Works, Inc. Niagara Falls, N. Y. McCallum-Hatch Bronze Co. Buffalo, N. Y. Mid-State Mfg. Co. Waupun, Wis. Miller-Parrott Baking Co. Terre Haute, Ind. Missouri Valley Bridge & Iron Co. Leavenworth, Kan. Monroe Steel Castings Co. Monroe, Mich. Morrison Brothers Co.

Dubuque, Ia.

(Earlier winners of the Army-Navy award for excellence in production will be found in previous issues of Business Week.)

Oil Well Supply Co. Oil City, Pa. Oregon Brass Works Portland, Ore. Herman D. Oritsky Co. Reading, Pa. Otis Elevator Co. Buffalo, N. Y. Palmer Scott & Co., Inc. New Bedford, Mass. Penn Electric Switch Co. Goshen, Ind. Philadelphia Insulated Wire Philadelphia, Pa. Phillips-Jones Corp. Barnesboro, Pa. John Reiner & Co. Long Island City, N. Y. Rex Mfg. Co., Inc. (Two plants) Rock River Woolen Mills Janesville, Wis. Sight Light Corp. Deep River, Conn. Solomon, Goldstein & Portnoy Co. Brooklyn, N. Y. Spencer Lens Co. (Two plants) Standard Oil Co. of California Richmond, Calif. Stow Mfg. Co. Binghamton, N. Y. Talon, Inc. Meadville, Pa. Taylor-Winfield Corp. Thibodaux Boiler Works, Inc. Thibodaux, La. Union Asbestos & Rubber Co. Chicago, Ill. The Wadsworth Watch Case Co. Dayton, Ky. Ware Shoals Mfg. Co. Ware Shoals, S. C. The Weatherhead Co. Cleveland, O. Western Gear Works Seattle, Wash. Worthington Pump & Machinery Corp. Wellsville, N. Y.

5,000 tons of copper-40% of all rollers in the hands of textile printers and dealers—will be reclaimed by this action, and its effect will be to limit sharply the variety of patterns available, and to encourage larger runs per pattern than has been customary. (Order M-280.)

Dyes and Pigments

been

Feb.

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PERM

mits han Purchase and sale of all organic dyes and pigments for civilian use has been cut an average of 40% below 1941 figures by WPB. Sole exceptions to the order are dyes and pigments derived from vegetable sources and organic dyes synthesized or produced from relatively noncritical materials. The order is retroactive to Jan. 1, 1943. (Order M-103, as amended.)

Farm Machinery

Allotment of steel for the manufacture of farm machinery in the first quarter of 1943 has been raised about 36% by WPB—from 137,000 tons to 187,000 tons. Top priority of AA-1 is assigned to delivery of the steel involved. At the same time WPB has revised Order L-170, modifying several restrictions on the manufacture and distribution of farm machinery and equipment.

Repair and Maintenance

Producers of iron and steel have been assigned a rating of AA-1 for acquisition of repair and maintenance materials, as compared with ratings of AA-2X and A-1-a in effect previously. (Order P-68, as amended.)

Higher ratings have been granted for emergency repairs to refrigeration and air conditioning equipment. Users of such equipment formerly entitled to A-1-a are raised to AA-2X; those holding A-3 to AA-3; and those holding A-8 to AA-4. (Order P-126, as amended.)

Typewriters

Rationing of typewriter rentals to nongovernmental users, scheduled to go into effect Feb. 1 (BW-Jan.2'43,p55), has been postponed until May 1. (Amendment 1 to Ration Order 4A.)

Service Stations

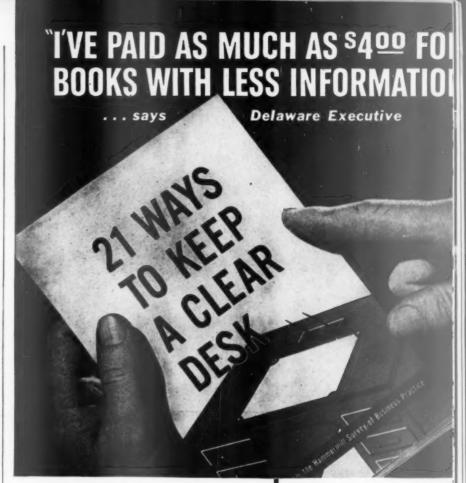
The regulation covering gasoline credit cards (BW-Jan.9'43,p51) has been amended to ban issuance of all such cards except for use of federal, state, and local governments, for vehicles bearing "T" ration stickers, and for commercial motor boats. (Petroleum Directive 62, as amended.)

A formal order has been issued regulating hours of operation of all service stations. Station operators have two options. Either they may stay open not more than 72 hours a week and not more than 12 hours a day, or they must stay open 24 hours a day, seven days a week. In the latter case they may serve only "T" card holders in hours outside of the six-day, twelve-hour limit set up in the first option. (Petroleum Administrative Order 4.)

Antifreeze

Manufacture of "deleterious" antifreeze solutions, including those made from calcium chloride, magnesium chloride, sodium chloride, and certain petroleum distillates,

Business Week • January 30, 1943



IT'S YOURS—FREE —if you mail coupon now!

WARTIME pressure getting you down? Are you up to your ears in red tape, with a desk that looks a "junk heap"? Do you spend half your day attending personally to 1001 details that ought to be passed on to others . . . then lie awake half the night worrying about jobs you haven't had time to get at? Couldn't you accomplish more if you could unload those details, free your mind and your desk for important matters?

Then send today for your free copy of "21 Ways to Keep a Clear Desk"—the time-saving book that has helped thousands of hard-pressed business men.

This book is full of practical ideas on how to organize work, speed up routine, avoid "junk heap" desks. It gives you specific, tested ways to handle details almost automatically—schedule jobs, keep them moving, get them done right and fast. It outlines proven time savers for men in six different office jobs. Get a copy of "21 Ways" book now.

HOW TO PUT THESE IDEAS TO WORK



Send for booklet, "How to Design a Business Form." It shows how to design forms that answer the who, what, when, where and how of every job . . . how to organize form control . . . how to set up a color signal system. Contains check list for testing your present forms.

Hundreds of businessm' say this free time-say speeds war work and avo "junk heap" desks

Indiana: "Obtained valuable sug tions which have saved me time trouble by eliminating much cor ing detail on and in my desk,"

Verment: "Your booklet has bee considerable aid in building up organization, which under present ditions is necessarily compose young and inexperienced people."

Michigan: "It has helped me to tribute my work more evenly and provided a better follow-up meth

Missouri: "With your ideas we revised some of our forms and i tuted new ones at a saving all arou

Wisconsin: "It gave me two idea cutting out waste motion."

Georgia: "Helped me design four forms to save typing and clear rou matters more quickly."

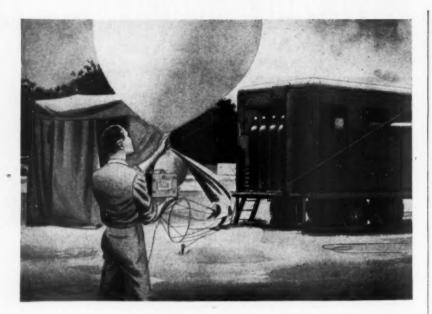
Use this Valuable Coupon

Hammermill Paper Co., Erie, Pa.

Please send me without charge copi "21 Ways to Keep a Clear Desk" "How to Design a Business Form."

Name

(Please attach to your company letter



SIGNAL CORPS "WEATHER MEN"

WORK IN LINDSAY STRUCTURE COMBAT BODIES

YOU CAN SPEED PRODUCTION OF VITAL WAR EQUIPMENT with LINDSAY STRUCTURE

Truck and Trailer Combat Bodies Barge Deck Covers Boat Superstructures Floats and Pontoons Troop Sleeper Caravans Refrigerated Storehouses Shipping Containers Frozen Beef Containers Hangars Sentry Boxes Portable Guard Houses Bunk and Mess Houses Radio Equipment Housings Housings Searchlight Housings (Dust-Proof) Fire-Fighting Apparatus Partitions (Movable), Office, Storage, etc. Processing Rooms and many others

Providing protection for delicate instruments and supplies in theaters of operation the world over, Lindsay Structure combat bodies are used for a wide variety of wartime services — mobile workshops, hospital units, supply vehicles for food and ammunition, as well as this special meteorological laboratory.

Shell holes, rocks, soft sand, destructive heat, humidity, or cold have shown that only all-steel combat bodies insure dependable operation—continuous service. The Lindsay Structure method of assembly—which utilizes all the strength in light sheet metal—is the practical solution. It provides great strength and yet saves steel (over 1000 lbs. in the case of the Canadian Army mobile workshop).

Lindsay Structure combat bodies can be shipped "knocked down" to save priceless cargo space. They are easily assembled by unskilled workmen.

IMMEDIATE SERVICE ON YOUR PILOT JOBS for war equipment. Phone or wire Lindsay Structure Division, 226 North Bank Drive, Chicago, Ill.; or 60 E. 42nd St., New York, N. Y.

has been banned by WPB. Use of such solutions has been found highly destructive to radiators, ignition systems, and subber connections in automobiles and truck. In addition, vapors arising from petroleum base solutions are highly inflammable. Order L-258.)

Ice Cream

The Department of Agriculture has limited ice cream producers to a maximum of 65% of the milk and milk products they consumed during the twelve months ended Nov. 30, 1942. In addition, total milk solids content of ice cream is limited to 22% of the weight of the ice cream, and nonfat milk solids may not be more than 80% of milk fat used. (Food Distribution Order 8.)

Other Price Actions

A simple method for determining maximum prices for thousands of new miscel. laneous plastic parts and subassemblies used in essential war and civilian articles, most of which are made according to specifications of the purchaser, is set up in Order 229 under GMPR. . . . New ceilings on men's cotton flannel work shirts and specifications for their manufacture are set up in Regulation 304. . . . Maximum prices for the 1942 crop of Connecticut shadegrown tobacco are fixed by Regulation 308.
... Regulation 305 sets ceiling prices at processor and jobber levels on corn meal, hominy, and related products. . . . Amendment 2 to Revised Regulation 73 fixes maximum prices on fish meal and fish scrap with protein content between 40% and 80%. . . Dehydrogenation catalysts and catalyst carriers used in the production of synthetic rubber are exempted from price control by Amendment 50 to Supplementary Regulation 1. . . . Amendment 22 to Revised Schedule 53 sets uniform nation-wide dollarand-cents ceilings on tallows and greases, including bone tallow and garbage grease. . . Amendment 90 to Supplementary Regulation 14 provides that sellers of cane blackstrap and beet sugar final molasses in less than tank car lots must maintain established base period differentials from tank car prices. Amendment 92 to Supplementary Regulation 14 sets a ceiling on pyrethrum flowers imported pursuant to WPB orders.

Other Priority Actions

The number of types of gate, globe, angle, cross, and check valves produced is cut from 4,079 to 2,504 by Order L-252.

. Use of alloy steel in angledozers and bulldozers and in repair parts is prohibited by Schedules III and IV to Order L-217.

. Order L-249 prohibits manufacture or shipment of any dental unit or dental chair except with specific WPB approval.

Restrictions in Order M-9-c on use of copper-engraved plates for stationery, calling cards, etc. (BW-Jan.9'43,p44) have been relaxed to permit use of old plates on the same basis as other graphic arts users of copper.

Many canned baby foods, including fruits, vegetables, and meats, will be rationed under the same point system as other canned foods, not because there is any shortage, but to prevent their being bought by adults as a substitute for other canned foods.

LINDSAY STRUCTURE

U. S. Patents 2017629, 2263510, 2263511 U.S. and Foreign Patents and Patents Pending

LINDSAY STRUCTURE CAN SAVE THOUSANDS OF TONS OF STEEL PER MONTH

60 . War Business Checklist

Business Week • January 30, 1943

PRODUCTION

Metered Results

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Instruments now replace skilled workers in wide range of applications where precise control is imperative.

War's pressure for greater, more precise production has forced industrial instruments into new types of applications and has greatly broadened their utility. Inevitably, many of these developments will carry over into postwar industrial

• Meters Replace Skills-War plants are using meters to control processes that formerly depended upon manual control by skilled men who are no longer available in sufficient numbers for expanded, three-shift operations. The infallible quality required in combat equipment is assured with use of instruments to maintain critical pressures, temperatures, power input, and other criteria. Moreover, instrumentation of types formerly confined to the laboratories has moved into the factory, is today found working full-time on production lines.

Consider the relatively simple process



AIRY FINGERS

Unique are air-cooled asbestos gauntlets used at Westinghouse's Bloomfield (N. J.) plant to speed handling of airport landing lights from hot ovens without burned fingers. Credit goes to a plant nurse who thought of gloves with air hoses when a beauty shop aid used an air blower to cool her head during a permanent wave session

Business Week • January 30, 1943



Power, motors, copper . . . all vital ingredients in the war production formula ... can be conserved with planned mechanical power transmission installations

Planned power transmission . . . which means using individual, multi-motor or modern group drives in proper combination based on war production requirements . . . is the most effective means of "putting all your power in the job" for quick, complete and final victory.

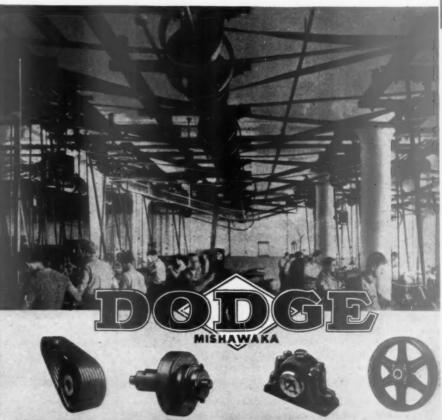
With modern Dodge Group Drive, one large motor does the work of Throw All Your many smaller ones, and your Scrap Into the initial costs become lower for

motors, controls, wiring and mechanic equipment. You can reduce connect horsepower . . . use fewer motors . . . release available motors for other vi work. You can step up production, save critical materials ... save manpow ... reduce maintenance time, labor a costs . . . improve your power fact You can depend on Dodge for "T Right Drive for Every Job." The li is complete. Each unit is engineered take today's punishing, around-the-clc war production duty. See your lo

Dodge Distributor for plann power transmission methods a stocks, or write to

DODGE MANUFACTURING CORPORATION, Mishawaka, Indiana, U. S.

Fight



RIGHT DRIVE FOR EVERY

of tempering molding sand. If Tony, the muller man, knows his stuff, he can accurately hold the moisture within the critical limits merely by feel. But today there are not enough experienced men available. Borrowing a trick formerly used by a few high-production foundries, industry today uses instruments to maintain the standard originally set by Tony's educated thumb.

• Tests for the Sand-An ammeter (or, with alternating current, a wattmeter) indicates the power being used by the muller, thus the consistency of the sand. To make it foolproof, some manufacturers use a green zone on the instrument face to show the permissible numerical range, red to show where limits

are exceeded.

The boss blower in a steel mill has always been an expensive man because getting the right steel from a heat depends on his highly developed skill. Now it is possible to hold a Bessemer converter within far tighter limits by using a photoelectric cell, an amplifier, and a recording meter to control the operation by color and brightness of the flame. The unskilled operator of a converter

with this form of instrument control watches the chart, and when the curve reaches the right stage, he shuts off the heat.

• Charts Picture the Tests-Because any failure in combat equipment is intolerable, much war production requires 100% inspection of parts and of finished articles. Consequence is that instruments are being used where previously a less rigorous inspection was standard. For instance, consider portable electric a.c. power generators driven by diesel or gasoline engines which have many military uses. Specifications require that each unit be exhaustively tested on recording instruments for power delivered to the load, voltage developed, current, and frequency. The actual instrument charts showing these performances must accompany the unit on delivery. Manufacturers are finding these instrument tests preferable to expensive running in. Tested by 200 Instruments—Military radio transmitters and receivers must be 100% tested for performance characteristics such as stability, sensitivity, and

output, as contrasted with the sampling

technique used for civilian sets. One

plant now inspects the production of one department with about 200 instruments, each one consisting of a sensitive milliammeter at the end of a train of electronic equipment.

Many types of civilian automotive production received their tests in the form of a run-in with subsequent examination. Military production of the corresponding units requires quality even closer to perfection and provides no

time for running in.

• Noise Tells the Story—Tank transmissions, for instance, are given noise tests with indicating or recording milliammeters on amplified vibration pickups. This was long established as a laboratory test but is now standard in the factory. The noise is an index of the fit and assembly of gears and bearings. Plants using this method find it more satisfactory than the run-in method, say that it pays to make the unit right in the first place.

Perhaps the most important transplanting of an instrument test from laboratory to production line is the use of instruments for continuous control of arc welding. By checking with instruments the current consumption in the arc and the voltage across it, an experienced man can detect when anything is wrong about the weld. In the lab, this was used for special testing and for research. Now it has been car-

ried into the plant.



That's the function of the new WPB engineering service installed experimentally in its Cleveland headquarters.

A brass foundry, converted by war orders to aluminum castings, was losing about 40% of its output through government rejection. At that point, according to the Cleveland regional office of the War Production Board, Production Engineering Service came in.

duction Engineering Service came in.

Ohio Experiment—PES has been operating in Cleveland, Akron, Youngstown, and Canton for the past three months on an experimental basis. The 15 men on its staff are separated from all other branches of WPB. Each has a background of shop and factory experience. They include general managers, production managers, and shop foremen.

The PES, a kind of consulting engineers' service, never goes into action except in cases where a specific delay is considered critical by one of the armed services and is so certified to the WPR

Production Speedup—In all PES operations, the object is production speedup. The PES man is directed to find any production troubles and see that





In a fly's eye are thousands of separate mirror surfaces; they give the fly an angle of vision far greater than man's.

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Strangely enough, a fly's eye is not unlike the Farnsworth Dissector Tube—or "eye"—of the television camera, which "sees" with hundreds of thousands of infinitesimal photocells. This miraculous eye of television is destined to give man a range of vision almost beyond imagination!

Farnsworth was a pioneer in the research and development of electronic television. Many discoveries which make television a reality—such as the dissector tube "eye"—have come from the Farnsworth laboratories.

Today those laboratories are applying the knowledge and skill of their 15 years of research to the task of developing electronic instruments for our armed forces.

The large Farnsworth factories, with thousands of employees, are applying their experience in precision manufacture to turning out vital war supplies.

Yet television progress still goes on! Many of the things we are learning in developing new implements of war will contribute to finer transmitting and receiving equipment when peace arrives.

Today the first duty of every man and every business is to win the war. And your purchase of War Bonds now will speed the day of Victory.

Then will come an America, brighter and greater even than before. And among the good things of peace you will have television—the ability to reach out through space, and capture on a living screen the events of the world as they occur.

FARNSWORTH TELEVISION

Farnsworth Television & Radio Corporation,
Fort Wayne, Indiana

Manufacturers of Radio and Television Transmitters and Receivers, Aircraft Radio Equipment, the Farnsworth Dissector Tube, the Capehart, the Capehart-Panamuse, the Farnsworth Phonograph-Radios

The one important test for every decision WILL IT HELP TO WIN THE WAR..?



"All There Is In Bearings"

THE TIMKEN ROLLER BEARING COMPANY

CANTON, OHIO

Manufacturers of Timken Tapered Roller Bearings for auto-mobiles, motor trucks, railroad cars and locomotives and all kinds of industrial machinery; Timken Alloy Steels and Carbon and Alloy Seamless Tubing; and Timken Rock Bits.

they are corrected, whether they has pen to be due to priorities, production planning, or some technical difficulty.

In the case of the converted bras

foundry, PES assigned a man expens enced in aluminum casting work. He quickly determined that the metal wa being poured at too low a temperature that lighter sections were being poure last and, therefore, cooling too quickly, The PES man introduced chills, which are steel pieces placed in the mold to act as heat conductors; pouring tem perature was raised, and methods were rearranged to provide slow cooling for lighter sections. In one week, rejections

dropped from 40% to 4%.

• Pattern?—Cleveland WPB officials say their setup may fix a PES pattern for

other regions.



Arthur L. Foutch of the Illinois Central System worried a lot about tving up a crane truck and a platform lad der to remove and replace steel side sheets on freight cars (top). He suggested a special hand-hoist-equipped ladder to do the same job better (bottom), releasing both truck and platform ladder for other work.



Business Week . January 30, 1943

Yam Dehydrated

Texan's output limited now to fighting food; postwar possibilities seen in sweet potato as stock feed crop.

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As a small boy, Gilbert C. Wilson helped his father eke out a living on a tenant farm in the deep sands of the East Texas piney woods and saw tons of sweet potatoes thrown to the hogs because of glutted markets and ruinous prices.

• Food for Fighting Men—His sons will be spared that experience for, thanks to Wilson, a dozen new end uses for the humble yam have been developed, not the least of which is a dehydration process that is supplying energy-building food to the armed forces.

In fact, Wilson's sweet-potato chips, vitamin A flour, and diced yams have made such a hit with the Army that the government monopolizes the entire output of his two plants in Texas and ships his tinned products to every fighting front.

• Feed Crop—When military demand lets up, watch the yam spring into prominence as a cattle feed crop, another of the uses to which the researches of this 31-year-old chemistry teacher and his classes have led. Other yields of their study include a root starch which they believe can compete with the finest cassava imported from Java, sirup, dextrose sugar, ethyl alcohol, acetic acid, pectin, furfural, cellulose, and a rubbery plastic.

Wilson's research began in 1938. A raw graduate of North Texas State Teachers College at Denton, he was teaching chemistry at a country high school at White Oak, in the center of a great oil field. One of Wilson's first steps was to put his class to work on the secrets of the sweet potato. How assiduously they attacked the assignment is attested by the results that they have achieved. Many in the class since have risen to prominence as dehydration engineers.

• Pilot Plant Built—When he returned three years ago to North Texas State Teachers College as instructor in chemistry, Wilson and his students erected a pilot dehydration plant near Denton. With their own hands they built the walls of rammed earth and assembled the odds and ends of machinery they were able to buy, beg, or borrow.

Soon after the pilot plant began turning out dehydrated sweet potatoes, the Army's interest was aroused. After a minute inspection of the process, the Quartermaster Corps ordered 250,000 lb., followed this order quickly with one for several millions. Wilson obtained a loan from the Reconstruction Finance Corp. to double the capacity of the Den-

CONTROL the Critical Factor in "Production Line" Shipbuilding

In the new "production line" shipyards, vessels slide down the ways at a speed which will make history tragic for the Axis. The swift pace of this new type of shipbuilding is

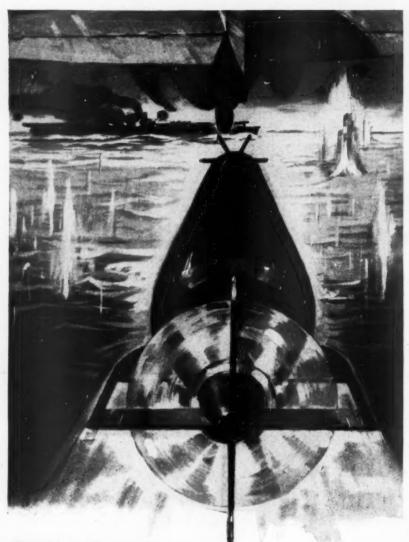
made possible by close control over each step of production. A Control as the critical factor in production for modern war is a principle which has always been emphasized at the Lebanon Steel Foundry. Lebanon neither overlooks nor slights any control step that will promote the soundness and integrity of Circle Castings. One important Lebanon control operation is illustrated above. The expertly trained inspector is checking a casting for dimensional accuracy. All Circle Castings are given this check-up to see that they correspond to blueprint dimensions. To obtain Circle Q quality, Lebanon pays the premium of close control over every phase of production. That's why Circle Castings measure up to the requirements of industries that will not compromise with high standards ...industries such as Worthington Pump and Carrier Corporation.

or Steel Casting

LEBANON STEEL FOUNDRY, LEBANON, PENNSYLVANIA

ORIGINAL AMERICAN LICENSEE GEORGE PISCHER (SWISS CHAMOTTE) METHOD





TOJO, here's your

T.N.T. FOR BREAKFAST!

... Thanks to a "Dust Pan" of 1860

Smooth as glass is the finish of the outside casing of this half ton missile of destruction. Watch-spring accuracy is in the turning and polishing of its propeller blades. This acme of mechanical perfection which assures unerring aim and split second timing was made possible by delicately adjusted precision machines back at the Navy Torpedo Station where this mammoth Fish was hatched.

What has a "dust pan" of 1860 got to do with it?

Just this: The plant where this torpedo was made is dust free. The machines are protected against abrasion which could quickly affect their micrometric accuracy by a Sturtevant System which whisks away the most minute particles of metal that spurt from the finishing tools.

The principle goes back to the original installation of Ben Franklin Sturtevant, founder of the air handling industry. This installation, made in 1860, was a fan which sucked up flying sawdust from his machine for making shoe pegs.

Thus it is that yesterdays of Sturtevant Pioneering are paying dividends today... putting air to work in countless ways to step up the pace and power of America's war machine.

B. F. STURTEVANT COMPANY HYDE PARK BOSTON, MASS.





Through class experiments with the plentiful yam, chemistry teacher Galbert Wilson (left) has given the South something new in dehydration.

ton plant, and a second loan to build a \$250,000 dehydration plant at nearby Pittsburg, the sweet-potato capital of East Texas. Together the plants have a processing capacity of 400 tons of raw yams a day.

• Tunnel Dryers Used—Wilson began his experiments with a homemade roller press and canvas belts, and a revolving drum heated by a flame of natural gas. In his new plant he also uses tunnel types of dryers.

In competition with buyers of table stock, Wilson pays top prices for his yams. The several hundred hill folk he employs have no worries about job security. Grocery chains are eager to stock his yam flours and meals, his chips and stock feed, but must wait for the end of the war.

• Equal to Corn—The future of the dehydrated sweet potato as a cattle feed seems assured. In nutritive value, it is the pound-for-pound equal of No. 2 yellow corn. The South's sandy land yields only 10 bu, to 15 bu, of corn per acre, compared with as much as 60 bu, to 100 bu, per acre in Iowa or Illinois. But the same sandy soil will yield 200 bu, to 300 bu, of sweet potatoes, which when dehydrated, amount to 70 bu, to 100 bu, of concentrated feed equal to corn. It means a new carbohydrate feed crop for Dixie.

NEW FRUIT WRAPPER FOUND

Crown-Zellerbach Corp., Pacific Coast paper manufacturer, is introducing an antispoilage, diphenyl-treated wrapper which is supposed to do for oranges, lemons, and grapefruit what other treated wrappers have done toward preserving apples and other deciduous fruits.

After checking for several months on shipments of Texas citrus fruits wrapped

in the new paper, Crown-Zellerbach reports general agreement that its wrapper reduces mold and decay and tends to keep fruit in better condition, firmer, and more tree fresh.

Company researchers explain that any oil-treated citrus wrappers they have developed previously have protected largely by delaying seepage of decayed fruit through to unspoiled portions of a shipment. The diphenyl-treated wrapper, they claim, dries up decayed fruit before it begins to leak.

The new wrapper is expected to be particularly valuable in reducing spoilage on citrus fruit shipped near the end of the season when a larger proportion approaches the "over-ripe" classification.

Mixup on Fuels

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It's thumbs down among power engineers on coal-andoil mixture in place of oil although Ickes is pushing idea.

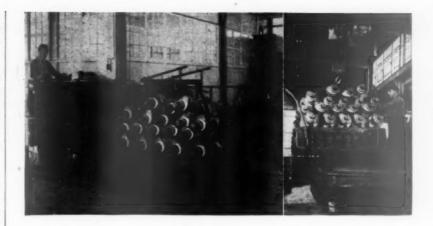
Week before last, Representative Fred A. Hartley wrote Fuel Administrator Harold Ickes recommending "colloidal fuel," a mixture of oil and powdered coal to replace straight fuel oil in large industrial furnaces and telling him that the combination fuel could be used with existing industrial oil burners.

used with existing industrial oil burners. Last week Mr. Ickes replied, stating that a "properly prepared" mixture would "contribute substantially to the conservation of fuel oil for heating, processing, and power generation," and adding that he was taking up with the War Production Board the question of securing priorities on materials to fabricate coal pulverizing equipment.

This week, power plant engineers are busy explaining to querying managements (1) that mixed fuel can be burned in a standard oil burner, but with possibly disastrous results from the abrasive action of coal on fuel jets; (2) that the burning of coal and oil together has been done commercially only in installations with separate orifices for the two fuels and with special equipment to handle coal ash; (3) that a ten-ton crusher for pulverizing coal to the fineness required by standard powderedcoal firing becomes in effect a three-ton crusher when it is called on to produce the fineness required to keep coal suspended in oil; (4) that Ickes must have been oversold on the mixed fuel idea by enthusiasts who have been plugging the idea unsuccessfully for years.

SHIFT-O-GRAPH

The mysteries of scheduling work shifts for continuous or almost continuous operations are solved by a device that the George S. May Co., specialists



No Break-Bulk Here

One of a series of advertisements showing how BATTERY INDUSTRIAL TRUCKS are speeding war production by handling materials efficiently.

Illustrated above is a simple but very effective way of breaking a once-troublesome bottleneck in the handling of interplant shipments.

The shipper puts the materials in skid boxes at the end of process. Lift trucks put them aboard highway trucks—a whole three-ton skid load at a time. Loading time: only a few minutes.

At destination, overhead traveling cranes put the loads on the receiving room floor, then other lift trucks pick them up and take them to storage and process. Again, a whole skid load at a time. Again, only a few minutes.

Two major savings result: (1) in the man-hours formerly consumed when done one piece at a time, (2) in the idle time of the highway trucks once wasted while waiting to be loaded and unloaded. For additional information on skid shipping, send for our Material-Handling Handbook.



THE INDUSTRIAL TRUCK STATISTICAL ASSOCIATION

MEMBERS - TRUCK MANUFACTURERS: AUTOMATIC, BAKER, CRESCENT, EASTON, ELWELL-PARKER, MERCURY AND YALE; BATTERIES: EDISON, EXIDE AND PULCO; BATTERY CHARGING EGOPMENT: ELECTRIC PRODUCTS AND MERTHER.



QUICK ACTION ON ENGINEERING PROBLEMS

> MANAGEMENT DESIGN CONSTRUCTION

SANDERSON & PORTER ENGINEERS AND CONSTRUCTORS

CHICAGO . NEW YORK . SAN FRANCISCO

WM. E. HOOPER & SONS CO.

New York PHILADELPHIA Chicago Mills: WOODBERRY, BALTIMORE, MD.

Since 1800 (through six wars) the HOOPER name has symbolized highest quality in Cotton Duck and other Heavy Cotton Fabrics, Paper Mill Dryer Felts, Filter Cloth, Rope and Sash Cord



HOOPERWOOD COTTON DUCK

Tax Reserve Accounts

Individuals, partnerships, and corporations may find it convenient at this time to set aside from their general balances, funds reserved or being accumulated for taxes.

This Trust Company is glad to accept deposits of this nature and to assist those who may be interested in establishing tax or other reserve accounts.

FIDUCIARY TRUST COMPANY

OF NEW YORK

One Wall Street

DIgby 4-0010

in business engineering, has prepared and is distributing without charge 'as a contribution to our national war effort,"

The device, called the Shift-o-Graph, consists of a revolving disc bearing colored charts of a full cycle of shifts. The disc is turned and the work schedules for "last week," "this week," and "next week" are visible through windows in the covering card. Copies may be obtained from the May Co., 2600 North Shore Ave., Chicago.

Plane Artists

Aircraft production and repairs are speeded by arty catalogs prepared by the staff of War-Art Associates.

One angle of aircraft production escaping general notice is the demand it has created for commercial artists, a need that was brought to light by the organization of War-Art Associates in Los Angeles.

• Art Interprets Blueprints—Wholesale hiring of inexperienced workers, many of whom couldn't identify blueprints, is compelling plane makers to prepare elaborate handbooks containing easily understood drawings and identification of each part a worker must handle. One Southern California plant, for instance, employs almost 1,000 artists and has rented a five-story building in order to house them.

The tremendous increase in Army and Navy air force training, especially of replacement center crews, has made illustrated catalogs necessary. Each plane is now equipped with handbooks listing and picturing every replaceable partafactor that has saved many planes grounded in remote places. Illustrations identify damaged parts which can be ordered by radio and delivered by parachute—even if the pilot can't read or speak English.

• Associates Serve Small Plants—Large plane makers can hire their own artists and handle all the specialized details of catalog production themselves, but it's difficult for smaller manufacturers and subcontractors. Also, commercial artists are becoming scarce. Brain child of Ray R. Conners, Jr., Los Angeles advertising artist, War-Art Associates was formed to take over art jobs for the "little fellows." (Conners is cultivating a fertile field because there are some 350 aircraft subcontractors in Los Angeles alone.)

War-Art Associates has lined up a staff of 125 full-time and part-time artists and is equipped to handle the entire handbook and catalog process. Conners reports that all work is done to Army Air Forces specifications and in cooperation with the Air Forces Pro-

curement Office.



* TRUCK-TRAILERS *

Chosen by
UNITED PARCEL SERVICE in PEACETIME
are Doubly Valuable Now!



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At any time, delivery service such as United Parcel Service gives in Chicago, New York and other large cities is a great public convenience.

But in war-time, it's much more than that. It's a big aid toward winning the war, because it conserves so much gasoline and precious rubber. Serving many stores and shops, it prevents a wasteful duplication of delivery mileage. Further, one

delivery by the U.P.S. saves trips . . and rubber and gasoline . . for hundreds of householders. Such consolidation is advocated by the government.

U.P.S. goes still farther, though, in conserving not only rubber and gasoline, but also steel and motor power. Here's how: In Chicago, for example, where it serves three of the largest department stores and more than 150 shops, a fleet of fourteen Fruehauf Trailers is used

- RUBBER AND STEEL ARE CONSERVED because a Truck-and-Trailer combination uses about 16% less weight of tires and 25% less steel than do the two trucks required to carry the same payload.
- FEWER TRUCKS ARE USED because any truck, pulling a Trailer, can haul two or three times as much
 as it is designed to carry.
- GASOLINE IS CONSERVED because each U.P.S. truck, pulling a Trailer, uses far less fuel than
 would the two or three trucks it replaces.

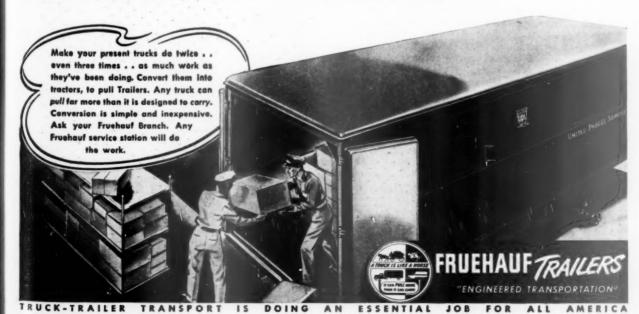
If there's a hauling job where costs must be figured under a microscope, it's parcel delivery. Pennies add up fast!

That's why U.P.S. decided to try Trailers. And it's why, in less than two years, it purchased a total of fourteen . all Fruehaufs.

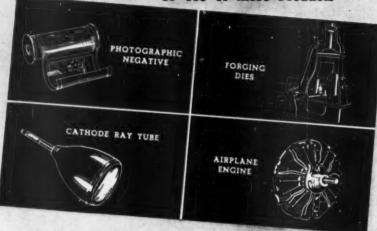
U.P.S. uses the "shuttle system" . . one truck handles three Trailers. While the

truck is pulling one Trailer, the two others are being loaded and unloaded. Truck and driver are never idle. That's a further big economy . . and conserves still more rubber, steel, gasoline and motive power for the war job.

World's Largest Builders of Truck-Trailers
FRUEHAUF TRAILER COMPANY, DETROIT
Sales and Service in Principal Cities



dag COLLOIDAL GRAPHITE IS IMPORTANT in the Manufacture Or Use of these Products



HERE ARE THE RULES

Acheson Colloids Corporation will give a \$25.00 War Bond to each of the 5 people who submit complete and accurate answers together with the 5 best letters on the question, "Why is "dag" colloidal graphite important in the manufacture and/or use of the products pictured here?" (1) State business connections (no one in the graphite field or their families will be eligible). (2) All entries must be legible. (3) All entries must state the publication in which the advertisement was seen. (4) Entries must be postmarked not later than March 1, 1943. (5) In case of ties, duplicate awards will be made. (6) Entries become the property of the Acheson Colloids Corp. (7) The verdict of the judges will be final.



"dag" COLLOIDAL GRAPHITE FOR TREATING SCREW THREADS

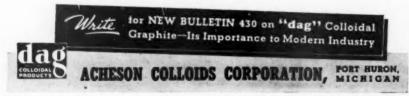
Screws and bolts which have long been in place are often extremely difficult to remove, especially if the assembly of which they are a part has been exposed to heat, moisture, or the action of certain corrosive chemicals. In many cases they cannot be removed without being destroyed.

Typical examples of this are bolts, studs and nuts on engine manifolds and turbines, pipe, spark plugs, set screws used in large clothes pressing irons, etc. Likewise, electric lamp bulbs, subject to salt spray or chemical fumes, stick in their sockets so tightly they cannot be removed without breaking.

The time and effort used in removing

frozen screws can be saved by treating the threads before assembly with "dag" colloidal graphite. This material provides the necessary lubrication to reduce static friction between screw threads and to permit the removal of the screw with a minimum of effort. "dag" colloidal graphite is a lubricant which is not destroyed by the action of heat and which in some cases exhibits anti-corrosive properties.

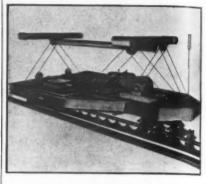
Screws and bolts treated with "dag" colloidal graphite may be drawn up tighter and with less effort than they could be otherwise. Such treatment is the only practical way of keeping anodized aluminum screw threads easily workable.



NEW PRODUCTS

Stabilized Suspension

Overhead tramrail loads supported by the flexible hoisting ropes of the new Stabilized Tramrail Carrier can be raised or lowered electrically through a considerable distance, yet are held rigidly against swaying and twisting. The carrier has been developed by the Cleveland Tramrail Division of the Cleveland Crane & Engineering Co., Wickliffe, Ohio, with a patented triangular sus-



pension wherein the rope angles bear definite relationships to one another and provide unusual stability.

Strangely enough, a load can be considerably unbalanced, or even tilted by raising and lowering the ropes, and still be held rigidly in place—qualities that suggest the carrier's future in airplane production lines, spray-painting lines, welding positioning, industrial X-raying, delivering hot metal from foundry cupolas to molds.

Versatile Respirator

Seven different types of air-filtering cartridges fit the new AO Model R-1000 Respirator, hence can be interchanged to protect the lungs of industrial workers against seven types and combinations of dusts, fumes, vapors, and gases: (1) toxic dusts like those caused by crushing lead, arsenic, chromium, and other ores; (2) irritating dusts which may accompany mining, quarrying, tunneling, etc.; (3) combinations of toxic, irritating, and nuisance dusts in comparatively low concentrations; (4) vapors arising from gasoline, benzene, acetone, turpentine, etc., as used in dry cleaning. spray painting, cementing, etc.; (5) fumes given off by sulphuric, nitric, and other acids used in plating and pickling: (6) gases and vapors from degreasing operations involving carbon tetrachloride, trichlorethylene, acetic acid, etc.; (7) ammonia fumes in "nuisance concentrations."

As manufactured by American Optical Co., Southbridge, Mass., the versatile mask covers the nose and mouth; air is breathed through one of the filters, expelled through an automatic exhalation valve. It is claimed that the dust-type filters will intercept particles as small as 1/40,000 of an inch, and that the gas-type filters will handle concentrations up to 2% by volume.

Detex

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It is one thing to ascertain the level of oil or gasoline in a tank with a measuring stick and another to ascertain the level of any underlying water that may be in the bottom of the same tank. That is where the Amco Corp., 1220 Randolph St., Chicago, says "Detex" comes in. It is a new chemical compound which comes in a jar like a cold-cream container. You spread a thin film of it on a gage stick or tape. Since water changes its color instantly from gray to red, and petroleum has no effect, both the water and the oil levels can be read at the same time.

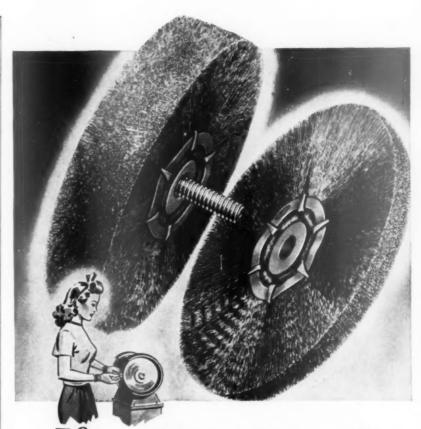
Surface Preparer

When any new or worn surface is to be built up with a metallizing gun, modern practice calls for a preliminary roughening to furnish a good bond. But if a metal surface happens to be heattreated to a high degree of hardness, or if a cylindrical surface happens to have a keyway cut in it, it is frequently next to impossible to get adequate roughening with shot blast or roughing tool.

For such work, Metallizing Engineering Co., Inc., 21-07 41st Ave., Long Island City, N. Y., recommends its new



Metco Fuse-Bond Process, utilizing a compact, specialized a.c. welder (not illustrated), which quickly fuses a rough deposit of electrode metal into the surface to be metallized without heating it enough to change its hardness or other physical characteristics. Electrodes are applied to the work with a special holder like that held by the operator roughening the bearing surfaces of a worn crankshaft.



How a Woman's war idea saved a year of Man-Hours

A 21-year-old woman worker at an Indianapolis war plant had an idea . . . an idea for increasing her company's production of a certain plastic part for military telephone equipment.

The flashing left on this part by the molding process was being removed by hand scraping. This young woman's idea was that it could be removed much faster with a wire brushing wheel. The company tried her suggestion and adopted it.

When the War Production Board conferred awards upon workers whose ideas for improving quality or quantity of war production had proved most valuable they selected for top honors 16 men and the young lady from Indianapolis. Her idea had saved 2925 man-hours—more than a year's work. In addition, the quality of the product was improved.

We're proud, of course, that the brushes used were made by Osborn. But our tribute here is to America's growing army of women war workers. They've tackled the biggest job they've ever faced. They are doing that job with determination, perseverance and intelligence.

In the final accounting, the contribution of American women to their country's cause will rank with the highest. The Osborn Manufacturing Company, 5401 Hamilton Ave., Cleveland, O.



WORLD'S LARGEST MANUFACTURER OF BRUSHES FOR INDUSTRY



ARE AVAILABLE FOR IMMEDIATE SASH REPLACEMENT

- No Priority Materials Needed

Today, when production is vital, industrial plants need protection against the inefficiency of faulty windows.

When worn-out windows are replaced with panels of INSULUX Glass Block, the plant is prepared for more efficient production now and after the war. INSULUX panels transmit ample daylight; have high insulating value; insure low maintenance; are fireproof, noncombustible.

If you have a job that requires window replacement, specify

INSULUX Glass Block. They can be easily installed without critical materials. Our book, "Alternate Construction Details" contains full details on construction.

Owens-Illinois Glass Company, INSULUX Products Division, Toledo, O.

OWENS-ILLINOIS
GLASS BLOCK



LABOR

Coal Miner Crisis

While WMC ponders lack of manpower in the Northwest, eastern mines ship vast tonnage to the Pacific Coast.

The growing seriousness of the manpower shortage in western coal mines (BW-Jan.23'43,p64) was starkly evident this week as the War Manpower Commission attempted to devise a program for providing 2,000 additional experienced miners for diggings in Washington, Utah, Wyoming, Colorado, and New Mexico.

• WMC Stumped—Prodded into giving special attention to the critical situation by Solid Fuels Coordinator Harold L. Ickes, whose communication to the War Production Board demanding action had been transmitted to WMC, the commission appeared to be stumped. It reported that hundreds of men already have been supplied to these mines through the United States Employment Service, but turnover rates are high and many have wandered off to other jobs.

It offered, as an illustration of the problem's complexity, the example of one Utah coal company that asked for several hundred miners but had housing for only seven.

 Vulnerable Area—Ickes demanded that something be done quickly to relieve the situation, because Pacific Northwest consumers are operating on a day-to-day



LADIES' LATHES

Further disproving the theory that women are poor mechanics, an all-female department in Cincinnati's Shipley Machine Tool Co. assembles, adjusts, and tests small lathes.



War and Postwar CONCRETE

On hundreds of war construction projects, firesafe, rigid, durable concrete is saving critical materials, transportation and time. And concrete highways, military access roads and streets, are saving millions of dollars in surface maintenance and millions of man hours of labor annually.

War construction experience combined with years of technical research, will enable concrete to render even greater service in wider fields of peacetime construction.

INDUSTRIAL BUILDINGS—The rugged strength, resistance to hazards and speed of construction provided by concrete for ammunition depots, arsenals and war factories will be of prime importance in peacetime industrial construction.

HIGHWAYS AND AIRPORTS—Sound engineering designs and durable concrete provide low annual cost pavements for expanding air and highway transportation.

HOUSING—Experience in building thousands of concrete war houses will help peacetime buyers to get attractive, comfortable, firesafe, homes with concrete walls and floors at low annual cost.

FOOD PRODUCTION—Concrete feeding floors and sanitary shelters are helping farmers produce more beef and pork with less labor and feed—more and better dairy and poultry products at lower cost.

Technical assistance on concrete problems is available to engineers, contractors and architects on all types of war construction.

PORTLAND CEMENT ASSOCIATION Dept. A1e-12, 33 W. Grand Ave., Chicago, III.

A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work



Buell Dust Recovery Systems help put it there

High Explosives are "booming" these days. America's arsenals are turning out astronomical quantities of bombs, shells and torpedoes...every one with a deadlier-than-ever "boom" for our enemies.

Sulphuric acid is important in the manufacture of explosives, but absolute purity of the acid is essential. Buell Dust Recovery Systems are used in conjunction with the contact method of making sulphuric acid because their high efficiency in removing contaminating flue dust from the sulphur dioxide gas assures purity in the finished product.

This is just one of many ways in which versatile Buell Dust Recovery Systems are helping industry achieve its war production goals by preventing contamination and salvaging critical materials for re-use. The van Tongeren "shave-off"—an ingenious design feature found only

BUELL ENGINEERING COMPANY, INC. 60 Wall Tower, New York Sales Representatives in Principal Cities



Factual 28 pg. book. Write for Bulletin B-43. in Buell cyclones—insures exceptionally high collection efficiency, low operating cost and long life. Buell cyclones have no moving parts and require little or no maintenance or attention.

Buell Dust Recovery Systems easily handle high temperature gases, and can be installed for any desired capacity from 300 c.f.m. up.



All the state of t

BUY WAR BONDS AND MAKE THE AXIS BITE THE DUST

fuel basis. He termed the area "one of the most vulnerable we have to deal with as far as fuel is concerned."

Ickes revealed that 107,700 tons of coal produced in Pennsylvania and West Virginia already have been moved off Duluth docks to supply the state of Washington. Another 130,000 tons will require the same movement, even if WMC can get enough labor to the western mines by next week.

Order Unfilled—By midweek, WMC had not announced how it was prepared to fill the Ickes order.

Manpower Drain

It's still a problem in the nonferrous metal mines, so tripartite conference urges a fivepoint corrective plan.

Metal mine operators, labor leaders, and War Manpower Commission officials of twelve western states, meeting last week at Denver, agreed that the labor stabilization order of last September (BW-Sep.12'42,p7) had kept some miners in the mines, but that the drain into higher-paid defense industries still is noticeable.

 Measures Recommended—After a twoday huddle behind closed doors, conferees agreed to recommend to WMC Chairman Paul V. McNutt five steps:

(1) To extend stabilization to labor shortage areas, where miners might turn up looking for work without the certificate required from the U. S. Employment Service when they leave a mine.

(2) To refer both the draft classification of a nonferrous metal miner, and his appeal, right back to his home board for final decision. This was accompanied by a request that McNutt and Selective Service Director Lewis B. Hershey make more explicit the conditions under which miners should be deferred.

(3) To educate the men as to the conditions under which they may leave mining and go into other work.

(4) To coordinate WMC's work closer with the National Housing Administration, OPA, National War Labor Board, and other war agencies.
(5) To tell the miners how badly the

(5) To tell the miners how badly the metals are needed, to buck up their morale and reduce absenteeism and jobquitting.

quitting.

• Many Nonmining Miners—The drain has slowed somewhat, partly because some high-wage construction jobs have been finished, but there still are plenty of miners elsewhere than in the mines.

Meanwhile the NHA is rushing work on \$6,000,000 of housing at western mining camps to hold the miners there. And the Nonferrous Metals Commission has recommended an increase of \$1

M-H Miracles WITH ELECTRONICS

experience to the techniques of war will bear fruit,

when Peace comes, in startling new developments

in the electronic control of automatic heating and

manufacturing processes. Minneapolis-Honeywell

Regulator Co., 2728 Fourth Ave. S., Minneapolis,

Minnesota. In Canada: Toronto, Ontario. In

Europe: London, England, and Stockholm, Sweden.

INSTRUMENTS BY BROWN FOR INDUSTRY

MINNEAPOLIS-HONEYWELL

TEMPERATURE CONTROLS

ELECTRONICS bids fair to revolutionize our

every day living after the war. When Minneapolis-

Honeywell placed its fifty year experience and

manufacturing resources at the call of our govern-

ment, the results of several years of research in

electronics were immediately applied to controls

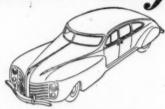
and devices for war . . . Extending this peacetime

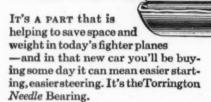
* Listen: "JOHN FREEDOM"

Blue Network Coast to Coast every
Wednesday, 9:00 to 9:30 P.M. Eastern
War Time; or see your newspaper.
"The Most Dramatic Show on the Air"



What is it about this Fighter Plane that can make that New Car start more easily?





And that's not all this unique antifriction bearing will do. Its unusual features will be reflected in improvements in many of the post-war products. A lawn mower that runs more smoothly ... a vacuum cleaner that takes up less room. Or an adding machine that needs less attention...a lathe that saves power in your plant.

Right now, of course, all the Needle Bearings that Torrington is making are going into war ap-

plications. But when industry swings back to civilian production, and you start catching up on your purchasing, you will find more and more Needle Bearings in the things you buy.

THE TORRINGTON COMPANY TORRINGTON, CONN., U. S. A. . Established 1866

Makers of Needle and Ball Bearings

New York Bossonia Chicago Cre-Toronto Boston Philadelphia Detroit icago Cleveland San Francisco London, England

IF YOU MANUFACTURE A PRODUCT THAT USES BEARINGS, see how these features of the Needle Bearing can be used to advantage in improving your designs:

1. Small size 2. Light weight 4. Efficient lubrication 5. Ease of Installation

6. Low cost 3. High load capacity

For complete information on sizes and ratings, and for list of typical Needle Bearing applications, write for Catalog No. 119.

ALWAYS REMEMBER TO ASK: DOES IT HAVE

TORRINGTON NEEDLE BEARINGS



MEN WANTED WHO AREN'T AFRAID TO DO A **REAL MAN'S WORK**

A CHANCE TO SERVE YOUR COUNTRY IN THE SHOCK TROOPS OF PRODUCTION

WAR MANPOWER COMMISSION

AND THE BUFFALO-NIAGARA AREA COMMITTEE

SPRIT AT U. S. SMPLETMONT SERVICE, ST GRAD OT. Street franks and frank St. 18.00 A. M. TO 10 P. M., MON. THROUGH SAT, DRURNEY 1 Aug 17.

Busine

LABOR LURES

Competition's keen (some say cutthroat) for labor in Buffalo, as may be judged from the War Manpower Commission's bid for 40,000 men for heavy work (above) and the glamorous appeal put forth by the aircraft companies (below).

You learn—they pay —"the Curtiss Way"! Curtiss Wright pays you \$24 a week while training you for work which you'll enjoy. There are yearnew acquaintances, new friendsnew acquaintances, new triends— there's a satisfaction in knowing that you're doing a definite job to help win this war! The Training School is conveniently located at Genesee and High Sts. Apply there any day except Sunday from 8:30 until 4:30 P. M.

a day to 10,000 employees of Anaconda Copper Co. in the Butte district.

 Approved by Byrnes—The increase was granted by Economic Stabilization Director James F. Byrnes, following the pattern of an NWLB grant last autumn to 10,000 miners in Utah and Idaho. The latter increase has been followed by juggling of production quotas which allows the lead and zine operators affected to get premium prices on more of their product. It is, in effect, a price hike for the more marginal producers.

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Approval by executive council of pact to arbitrate jurisdictional disputes with C.I.O. makes it mutual.

A number of bets were settled in labor circles this week as the American Federation of Labor's executive council ratified the agreement for arbitration of jurisdictional disputes with the C.I.O. which union conferees had negotiated in Washington last month (BW-Dec. 5'42,p8).

• Even Money—It had been an evenmoney wager that the A.F.L., sizzling mad over C.I.O.'s charge before the National Labor Relations Board that federation contracts in Henry J. Kaisers Portland (Ore.) shipyards were "collusive and illegal" (BW—Nov.28'42,p94), would vote down the first accord the two organizations had reached since C.I.O.'s creation in 1936.

Instead, the A.F.L. elected to give it a test that may prove its coup de grace—the Kaiser case. The executive council thereby saved the A.F.L. any blame for perpetuating the rift in labor. The C.I.O. already had approved.

C.I.O. already had approved.

• Award Would Bind Both—The accord provides that A.F.L. and C.I.O. representatives will constitute a panel to consider jurisdictional disputes. If the panel can't agree on a settlement, it may choose an arbitrator; if the panel can't agree on an arbitrator, the President of the U.S. shall name one. An arbitrator's award is to be binding on both organizations.

If a Solomon can be found whose judgment of the Kaiser dispute will satisfy both groups, effective labor unity will be a long step closer. If that miracle can't be managed, look for the new pact to become an almost stillborn dead letter.

SHOTGUN PEACE

The Pennsylvania hard coal mines were back in full operation this week after a three-week strike that dribbled out when President Roosevelt commanded the miners to return to their jobs (BW-Jan.23'43,p14). But none of the issues that precipitated the walkout was settled, and reports of grumblings in the pits led observers to conclude that the peace was tenuous and shaky.

The strike did not earn the miners any consideration for their two demands, lower union dues and higher wages; and Washington, happy that the affair had ended before Army intervention became necessary, admitted apprehensions about productivity. Fear was expressed that the miners, still nursing their griev-



IN THE LOGISTICS of transport and supply for our ever-increasing armies abroad, mechanical "stevedores" like this STEVE-KRANE built by Silent Hoist Winch & Crane Co., are playing an important role. And Bantam Quill Bearings on the boom sheaves and rollers contribute to their silent, powerful efficiency. These typical applications illustrate the utility of this compact, high capacity Quill Bearing in providing the advantages of anti-friction operation in materials handling equipment—while its small size contributes to simplicity in equipment design.



THIRTY-EIGHT INCHES in O.D., 21" I.D. and 19½" in length, is the size of this double-row tapered roller bearing built by Bantam for steel mill service. Designing and building large bearings for special jobs has long been an important part of Bantam's service to industry. Today Bantam is manufacturing some of the largest anti-friction bearings ever built to meet the needs of America at war.



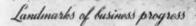
METALLURGICAL CHECK-UP is a regular feature of Bantam's inspection department. Here a laboratory technician is giving samples a microscopic examination to check grain structure of rollers and races. This rigid control is but one of the steps Bantam takes to insure adherence to exacting specifications in the manufacture of all major types of anti-friction bearings.

EXPERIENCED ENGINEERING COUNSEL based on the design and application of straight roller, tapered roller, needle and ball bearings is an important part of Bantam's service. If you are seeking competent assistance on your anti-friction bearing problems, TURN TO BANTAM. You will find our engineers will welcome the opportunity to work with yours in finding the right solution.



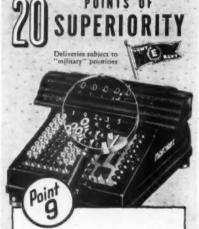


BANTAM BEARINGS CORPORATION . SOUTH BEND . INDIANA



ABOUT 1800, Edmond Dégrange Sr., accountant of the French Directorate, simplified the process of bookkeeping for many establishments by his invention of the Columnar Journal-Ledger.

Among modern calculators Marchant sets new standards of speed and accuracy with



The Keyboard Proof Dial

You begin every calculator computation with a keyboard setup, so your first concern is to make certain that the setup is correct.

This all-important detail is made easy by Marchant's exclusive Keyboard Dial, which gives quickglance proof of every figure. Each key depression is automatically recorded in this dial, making it easy to check entries and to make changes instantly. Marchant requires no zigzag hunt of depressed keys to check the keyboard setup, bringing speed, accuracy and good nature to all your calculator work.



Marchant Calculating Machine Company Home Office: Oakland, California, U.S. A. SALES AGENCIE'S AND MANUFACTURER'S SERVICE STATIONS GIVE SERVICE EVERYWHERE ances, would get out less coal than the anthracite diggings were counted on to produce for their share of the critical eastern fuel supply.

Another actual walkout looms as a possibility. In March, union and employer representatives will meet to nego-tiate a new contract. The miners want an increase of \$2 a day. If they don't get it, their present temper suggests that a second coal strike in 1943 will be difficult to head off.

Model in Lumber

West Coast body set up by NWLB serves as a pattern for industry commissions as a decentralization scheme.

Management executives can get a preview of how the new industry commis-sions, set up by the National War Labor Board in its decentralization policy (BW -Dec.26'42,p8), are likely to work in the operations of the West Coast Lumber Commission.

 Wages Are Standardized—Functioning since last September, the five-man body cleaned up its biggest chore last month by establishing uniformity in wages among the 65,000 lumber and plywood workers in Oregon and Washington (BW-Dec.26'42,p58). The job was an eve-opener to observers familiar with the complexities of labor relations in the Pacific Northwest lumber industry (BW -Dec.14'40,p17).

The commission has settled 26 formal cases since it held its first hearing Oct.13 and nipped in the bud many lesser disputes before they reached the formal hearing stage. All decisions and orders have been unanimous.

• No Partisans-None of the commission's members came from the lumber industry or from either of the two dominant unions (the C.I.O. International Woodworkers of America and the A.F.L. Northwest Council of Lumber Workers). Thus, they aren't subject to as direct pressure as they might be.

As originally established, the chairman could make a final decision if the commission split. Soon after operations began, this rule was changed at the request of Chairman Benjamin H. Kizer, a Spokane attorney, who felt that such a setup would not hold the confidence of employers and unions.

 Certification Procedure—Most cases have come to the commission from NWLB. In contract negotiations between unions and employers, if the Dept. of Labor's conciliation service fails to achieve an agreement, the case is certified to NWLB, which refers it to the commission.

In the case of disputes, the commission doesn't wait for the nod from



TROUBLE SHOOTER

Edwin E. Witte, social security expert, long-time labor mediator, and University of Wisconsin economics professor, sat on the labor front's hottest seat this week as the National War Labor Board named him chairman of the Regional War Labor Board for Detroit. With eleven other boards (BW-Jan.23'43,p70), the new agency operating in Detroit will function on its own as a little NWLB. Biggest war plants in the nation come under Witte's jurisdiction, and labor is restive in his territory.

Washington. At the first sign of a strike, it takes jurisdiction in an effort to keep men on the job. Incidentally, outbreaks of this kind have averaged about two a week.

 Close to Autonomous—The group has full power to decide disputes and doesn't have to refer decisions to NWLB for approval, but it can be overruled. Minor cases are assigned to a referee, who holds hearings, takes evidence, and submits his findings to the commission for decision.

The group has no recourse to courts for enforcement of decisions. It relies on one potent "big stick"-it can ask the War Manpower Commission to "unfreeze" workers at any objecting employer's plant.

UNION DIAGNOSIS

To investigate industrial disabilities and accidents, the C.I.O. United Automobile Workers has opened a medical research institute, staffed with doctors and technicians, in Detroit.
Dr. James E. Davis, director, said the



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When a sneaking, treacherous enemy struck at America, in December, 1941, immediate action was vital to the nation's safety.

The rapid, unprecedented expansion of America's armed forces and the conversion of the nation's industries and resources for gigantic war production demanded immediate mass transportation.

The American railroads were ready—ready because in the 20 years before war struck, they spent more than TEN BILLION DOLLARS for additions and improvements of all kinds to the railway plant. They were ready because tractive power of steam locomotives is 48 per cent greater than in World War I, because freight trains run two-thirds faster, because freight car capacity is 21 per cent greater—in short, because of improvements and increased efficiency all along the line.

Since Pearl Harbor, the American railroads, with the cooperation of shippers and government, have handled successfully the greatest traffic load of all times—11,000,000 members of the armed forces (in the first year of war), 6,000 carloads of materials a day to government camps and plants, 34,000,000 gallons of oil a day, 2,500 to 3,000 carloads of freight a day to ports of embarkation, plus huge civilian traffic.

No one knows how big the war traffic load in America will grow. But the load is increasing. The Norfolk and Western Railway and the other railroads of the nation will continue to handle the job efficiently, but they must be permitted to buy materials for essential maintenance and replacements to meet the increasing demands. America cannot afford to neglect her railroads.

Norfolk and Western

RUY U. S. WAR BONDS

institute would be a diagnostic center "for the study of menacing industrial and environmental conditions and for industrial disabilities." Consultants will include Dr. Emery Hayhurst, head of the Industrial Health Commission of Ohio and consultant to the federal Social Security Health Service.

Subjects for the institute's research will be members of the U.A.W.-C.I.O., who may be sent to the establishment by union committeemen or stewards who suspect that their ailments may be of industrial origin. The institute will handle only diagnosis; treatment will be at clinics or hospitals, through customary channels.

Job Freeze Helps

In one month, Detroit's stabilization formula slashes work turnover 80%. Appeals to WMC board refused.

Jobs appear to be stabilizing in tempestuous Detroit as a result of the work stabilization program begun in December (BW-Dec.19'42,p93). United States Employment Service figures are cited by the War Manpower Commission's district board to show that turnover may have been reduced 80%.

• Many Changes Side-stepped—Normal turnover of 6% on 650,000 workers would be 39,000 per month, but in the plan's first month of operation only about 3,000 quit and sought releases from USES. Another 3,000 applied for releases, but 1,800 were sent back to their employers and unions for routine discussions. Few have returned to press claims, indicating they obtained satisfaction.

Of 297 workers who appeared in hearings before a review unit, 127 were granted releases along with retention of their seniority. (Their original employers, however, can summon them back whenever they are needed.) USES arranged satisfactory disposition of the problems of 408 employees who were slated for hearings. Twelve cases have come up to the district War Manpower Commission appeals board which upheld the review unit in every instance. • Some Case Histories-Desire to achieve higher skill-at better pay-lay at the root of most of the cases before the review panel. But the claims had to be justified. USES turned down a chemical still operator who was offered an aircraft assembly job in another plant on the grounds that his 60 hours of trade school training for the aircraft job did not justify a transfer.

A truck operator sought release to take an arc welding job, for which he had undergone 60 hours of CCC camp training. Denial by the review panel

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YOU CAN NEVER MAKE UP FOR LOST PRODUCTION

WHEN PRODUCTION slows down today, the chances are that adequate equipment . . and adequate protection . . are denied to the man at the front. Without sufficient planes, tanks, guns, he is at the enemy's mercy.

You may be able to compensate for lost production in your ledger. You may be able to make up for it in units by producing a little faster, a little later. But you may never be able to make it up to the man at the front, whose life you have jeopardized.

It is only when we think of slow downs in terms of the lives of brave men, that we realize their true importance. It is only then that we realize the importance of operating plants without interruption.

You can eliminate one source of interruption ... interruption due to faulty valve operation . . . by avoiding valve trouble before it starts.

Keep your valves . . . the controls of vital power and production fluids . . . operating smoothly in your plant. Inspect them regularly. Replace worn parts before they cause damage; for worn parts may destroy the whole valve. And when, eventually, wornout valves must be replaced, have the new valves selected and installed by experts. And above all, train green hands to operate and maintain valves properly.

Jenkins Engineers are ready to assist any management in developing a practical program of valve conservation.



Army-Navy "E" Pennant, awarded to Jenkins Bros, for high achievement in the production of war equipment.



Jenkins Bros., 80 White Street, New York, N. Y.; Bridgeport, Conn.; Atlanta, Ga.; Boston, Mass.; Philadelphia, Pa.; Chicago, Ill. Jenkins Bros., Ltd., Montreal; London, England.

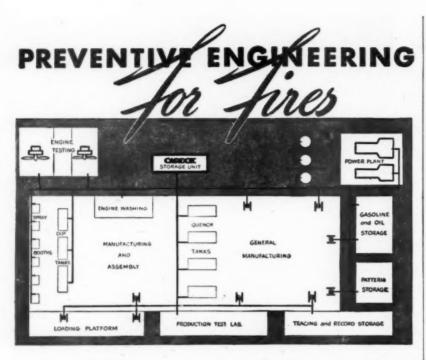


Reprints of this advertisement are available for use in morale-building work.

JENKINS VALVES

For every industrial, engineering, marine and power plant service . . . in Bronze, Iron, Cast Steel and Corrosion-Resisting Alloys . . . 125 to 600 lbs. pressure.

Business Week . January 30, 1943



An important message to executives who buy engineering for both present and future plans

The composite, schematic drawing shown here illustrates how Cardox Fire Extinguishing Systems and Cardox preventive engineering combine to stop fires before fire can stop production or cause extensive damage.

You will notice that the hazards are unusual, both in number and diversity. In such cases preventive engineering provides an entirely practical solution—determining in advance and drawing right into the Cardox blueprints individual hazard requirements for over-all fire protection.

Cardox in Your Plant

What this means to you is this: With a Cardox System you can protect many hazards in your plant with an application specifically engineered to the fire conditions involved, and all part of one complete system.

Further, you obtain the proved, practical advantages of Cardox Systems' enhanced fire extinguishing performance. Outstanding among them is the amazingly quick Cardox extinguishment of fires by mass discharge (in tons, if needed) of Cardox CO₂, supplied from a single Storage Unit that stores from 750 pounds to 125 tons of liquid carbon dioxide at controlled low temperature.

Your War-Time Status

War naturally restricts Cardox Corporation to the engineering of Cardox Systems to meet the most vital needs. Whether or not your need qualifies you, make Cardox progressive developments a part of your fire protection planning—present and future. Write, on company letterhead, for Bulletin 1123.

was upheld by the appeals board after it learned that 400 hours training is requisite for such welding work. A lathe operator was released, however, when he showed that his 80¢-an-hour pay was below the city standard for that work.

• Company Appeals Also Refused—Most of those coming before the appeals board had weak claims of higher skills and were denied. Appeals of companies that were unable to meet the qualifications of dissatisfied workers with other workers equally qualified likewise were turned down.

Cases involving transportation difficulties were infrequent. In one before the review panel, a worker was permitted to change jobs when he told that he had to hitchhike 42 miles to work daily.

BOOKKEEPER'S DREAM

Now that the 5% Victory tax has joined the family of payroll deductions, the International Harvester Co. pay check, more or less typical of industry generally, is accompanied by a deduction memorandum with space for 15 separate checkoffs. The deduction memorandum is twice as large as the paycheck.

Items that Harvester is prepared to deduct from employee earnings are: social security, victory tax, group life insurance, employee sickness and accident insurance, hospitalization insurance, war bond purchase, management retirement plan, management savings for bond purchases, management savings for tax notes, federal credit union, community fund, insurance premiums, local income tax, special bills receivable, and wage or salary advances.

Two other spaces on the slip are for gross and net earnings, and a third space is for indicating whether the employee is paid by the month or is paid twice a month.

a month.

TROUBLEMAKERS PENALIZED

As far as the Army Air Forces are concerned, no troublemakers will work in war plants. That was made plain recently in Detroit when eight employees accused of being ringleaders in a series of wildcat strikes at Bohn Aluminum & Brass Corp. were discharged from their jobs at the request of Col. George E. Strong, district plant protection officer.

Emphasis was lent the discharges by the fact that one of the eight men and women had already left his job and gone to work at the Packard Motor Car Co. He was let out along with the seven still left at Bohn, indicating that no war-plant jobs will be open in the future for anyone who is tagged with the label of troublemaker by the Army Air

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A Nice Lunch

Big companies invite group of reporters to hear blast on new proxy rules; it was a strong memo, but whose was it?

For more than a month now, listed corporations have been fuming over the new proxy regulations imposed by the Securities and Exchange Commission (BW-Dec.26'42,p66), but so far they have done all their swearing under their breath. Unless some of them manage to speak out loud, SEC is likely to get what it wants without ever having to fight for it.

• Fight Fizzles—There was a brief interval last week when it looked as though several big companies would start things going, but when the showdown came, it turned out that each one expected somebody else to be the patsy. Fearing kickbacks from Washington and Philadelphia, all were afraid to speak their minds.

On this occasion, half a dozen of the country's largest corporations put together a strong memorandum and invited New York reporters to lunch. Apparently it was to be the opening gun in a real fight against the new proxy rules.

• Strong, but Unsponsored—It was a well cooked lunch and a well worded memorandum, but there wasn't any fight at all. Seeing their names in print started the companies thinking about the contracts they have under renegotiation and the government advances they have on their books. By the zero hour, their representatives were steering the conversation away from proxies and trying to look as though they had just dropped in for a sociable drink.

After the memorandum had been read, somebody asked who sponsored it. There was a long, embarrassing, stage wait. Company representatives stared at their belt buckles or suddenly became fascinated with the pattern of the tablecloth. Finally the chairman volunteered that no one sponsored it, that it was "just background." In short, the companies insisted that the new rules were a blight, but they wouldn't admit they thought so.

• Who'll Carry the Ball?—This raises the philosophic question of whether there can be a thought without a thinker. More important, it raises the practical question of how the companies are going to get a modification of the rules if they aren't willing to fight.

Lawyers who have studied the rules predict that executives will get over



The Todd Form-Master cuts payroll posting time in half. Any clerk can post earnings statement, payroll sheet and payroll record all at once. Each figure is the same on all three forms—so actual earnings and payroll records are always in balance. The information that 7 government agencies require is immediately at hand without extra work. No more worry on that score!

Since there is no costly outlay for equipment, can you afford not to ask for details?

WHAT CUSTOMERS SAY:

"...It formerly took two days to prepare our payroll. We have cut this time to one day..."

The Philip Carey Company, Miami Cabinet Division, Middletown, Obio

• "...We have cut down the time spent on payroll and Social Security records by at least 50%..."

M. Ross Masson Company, Indianapolis, Indiana

"...At least 35% saving in time has been effected...We are in complete compliance in our recordkeeping...Can recommend your service to anyone having a payroll problem..."

Iroquois Foundry Company, Racine, Wisc.



THIS COUPON CAN SAVE WORRY!

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Please give me the facts : Master - without obligat	ion of course
Master - without obligat	ion, or course.
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Company	
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Address	
City	



their shyness as soon as they try to solicit proxies under the new system. Although the final version is well sugar-coated in comparison with the first duft (BW-Sep.19'42,p95), it won't be nice for management to swallow.

• Wide Ramifications—Perhaps most troublesome of all is the rule requiring proxy solicitations to list all important deals between the company and any of its directors or their associates. Catch is that "associates" include any other corporation in which a director holds a position. To comply, a company will have to check all its directors' connections, then go over its books to see if it has traded with any of them. After that it must decide what deals are important, always running the risk that SEC won't see eye to eye with it on the question of which deals should be listed.

Another big trouble spot is the requirement on approval of security issues. Until now, corporations have been able to ask for a sort of blank check proxy for issues of new securities without specifying their terms. From now on, they will have to furnish complete details in advance. Yet the ordinary market fluctuations make it hard for any management to commit itself to a specific interest rate and maturity three months or so before it tries to peddle an issue.

so before it tries to peddle an issue.

• Salary Disclosures—Other provisions are just as galling to executives. The revised rules call for disclosure of all compensation received by directors and officers making over \$20,000 a year. Big executives shudder at the thought of what will happen when their vice-presidents start comparing salaries. The new rules also make the annual report part of the proxy material, subjecting it to the same penalties as material filed with the SEC.

BALANCE SHEET TROUBLES

Stockholders who like to play around with corporation income records and balance sheets will need plenty of well sharpened pencils when they start this year. Wartime problems have forced accountants to make all sorts of changes in their traditional procedures. Auditors warn that a stockholder will have to read all the subtotals and footnotes to know where he stands.

One big headache comes when an accountant tries to allow for possible renegotiation of contracts. Some companies do it with footnotes. Others set up a specific reserve account, but most of them shy away from this because it either misleads the stockholder or advertises to the government that the company expects to kick back the amount of the reserve.

Another trouble spot is the 10% postwar refund on excess profits taxes, available at some hazy date in the future. Reserves for postwar contingencies also put auditors on the spot.

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Peanuts Pay Off

Incentive bonus applied to peanut raising in order to feed livestock and keep apace of industrial demands.

The peanut's role in the war effort was re-emphasized this week when Secretary of Agriculture Claude Wickard announced the goober would share in an incentive bonus of \$100,000,000, most of which will be spent to encourage production of the oil seed crops that yield edible oils and, as a byproduct, meal that is valuable as livestock feed and in varied industrial applications.

• Big Increase Sought—The government succeeded in getting an all-time record crop of 2,500,000,000 lb. of peanuts harvested from 3,690,000 acres in 1942. This year it is asking for 5,500,000 acres; these would produce (at ten-year-average yields of 708.2 lb. to the acre) close to 3,900,000,000 lb. of peanuts.

Needless to say, the peanut as food for man and beast is going to town as at no time in history. Growers have been getting fancy prices on the 1942 crop; they're looking for even fatter quotations next year as the current parity is around \$140 a ton, and they expect to be guaranteed at least 85% of parity in 1943.

• Postwar Markets Watched-Everyone in the peanut belt (it corresponds roughly to the cotton belt with Virginia and North Carolina the two largest producing states, each double its next nearest competitor) realizes that this is essentially a war market. But the growers already are working hard to preserve as many customers in the postwar era as possible.

The National Peanut Council, Inc., fostered and encouraged by the Dept. of Agriculture, spearheads this campaign. It has set up five committees to watch over the market—sales promotion, home economics, national peanut week, peanut meal, public relations and publicity. Moreover, it is seeking to develop new industrial uses for peanut meal and oil.

• Industrial Uses Widen—A large share of the crop in the past has been harvested for human consumption as nuts, peanut butter, and confections. The portion pressed for oil has competed in the field of salad oils and shortenings. Meal from the pressing process has been useful mainly as protein feed for livestock.

Yet the oil already has edged into industry. It can be refined to provide a lubricant for the finest watch; it goes



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Look Closel You're STUDYING VICTORY!

You've heard rumors of the incredibly precise instruments that guard, aim, detect, and protect for our fighting men and machines. We can't give away war secrets about how they work, but we can tell you how accurately they're made, for Ace men and tools are doing tricks for victory that couldn't be done in quantity a few short

years ago.



"Concentric within .0001

Those tiny "beads" pictured at the left are really rollers. They're so accurate that the heat of your hand throws them out of tolerance. An invisible scratch would make them useless. The hole and the outside diameter must be

so concentric that they can be checked only on a band of light. If the No Go gauge so much as "feels" the hole, they're rejected. Specifications read: "Outside and inside diameters to a mirror finish and concentric within .0001 inch." We deliver them in thousands.

That's the kind of precision that is going to save you time and money after the war. It will make your product more accurate, more lasting, quicker-to-assemble, than was ever thought possible. If you are considering small parts or assemblies—machined, stamped, or ground, have an Ace up your sleeve. Send us a sample, sketch, or blue-print for quotation.

... and 100% parts inspection"





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THE MARKETS

This is one of the times when Wall Street starts drawing fine distinctions between primary and secondary movements in the stock price averages. Cagey speculators are playing a day-to-day game.

• Big News Brings a Spill—Typical of this attitude was the market action this week. On Monday and Tuesday prices were strong on widespread rumors of the Roosevelt-Churchill accord on the high strategy of the war (page 5). The Monday rise was particularly impressive for its old-line leadership. That on Tuesday was the most active of the year (topping a million shares on the New York Stock Exchange), but the rise was considerably less extensive than the day before, showing the stiff resistance the market meets on the rise at the moment. Then, on Wednesday, after the news was out, prices gave ground quite readily.

Bears (the short-term variety) cited the week's erratic performance as one of the reasons they refuse to be impressed. Sooner or later, they say, the market will have to back off and make a fresh start. Moreover, prices have been on the upgrade for some nine months now. The market, standing nearly 40% above its April low, will be vulnerable to bad news, and with tax legislation coming up in Washington, the news won't be rosy for the next few months.

 Income Evaluations—Wall Street is keeping a watchful eye on the first of this year's crop of corporate earnings statements, but so far it has had no

statements, but so far it has had no particular surprises. U. S. Steel reported net income of \$25,646,452 for the fourth quarter of 1942, which figures out to \$2.23 a share on the common. At first glance, this looks like a striking gain over the September quarter, when Big Steel reported only \$12,628,836. Actu-

ally, the difference lies in the tax accounting. In the final quarter of 1942, the company gave itself a tax credit of \$6,200,000 to offset over accrual in preceding months.

For the full year, U. S. Steel shows earnings of \$72,142,195 in 1942 and \$116,019,518 in 1941. Taxes last year totaled \$227,891,237 (roughly three times the net left for stockholders) against \$191,502,574 in 1941.

• Paying Off Tax Exempts—Big news in the government bond market this week was the Treasury's decision to retire \$454,000,000 worth of \$\frac{3}{2}\%\$ bonds that reach their call date next June 15. Exidently government authorities feel sure of their control of the money markets and intend to go ahead with their plans to clean out the old, high-rate, tax-exempt issues.

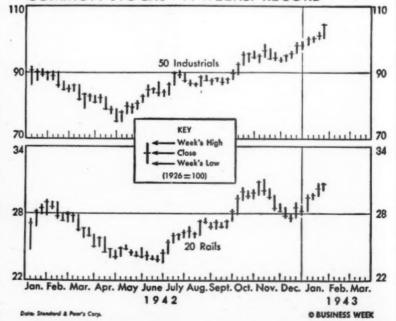
The treasury also announced that its offer of \$2,000,000,000 worth of \$\frac{2}{3}\$ certificates had drawn a total of \$6,403,000,000 in subscriptions, an impressive demonstration of the way it can make the market come when it whistles.

Security Price Averages

This Week Stocks	Week Ago	Month Ago	Year Ago
Industrial104.5 Railroad 30.7 Utility 39.1	101.0 30.3 38.0	98.0 28.2 35.1	89.8 29.0 35.1
Bonds			
Industrial 115.7 Railroad 91.2 Utility 110.6 U. S. Govt . 109.6			107.9 88.2 104.9 110.1

Data: Standard & Poor's Corp. except for government bonds which are from the Federal Reserve Bank of New York.

COMMON STOCKS - A WEEKLY RECORD





Peanuts play a big part in the government's campaign for production of more edible oils-and are cracking a lot of new markets. Its "week" found interested Southeasterners gathered in the Washington office of Rep. Stephen Pace of Georgia (with knife).

into shaving creams, shampoos, and cosmetics, sometimes is used in the treatment of infantile paralysis and even m the manufacture of nitroglycerin.

• Accent on Feed-Similarly, the meal is going places where it was never seen in the past. Along with such other oilpress byproducts as soybean meal, it is being used to produce high-protein flour for bread (BW-Oct.24'42,p43). Experiments have been conducted looking toward its use in production of synthetic wool and its wider use in plastics and fiber for wall board.

Yet the Dept. of Agriculture this year is most vitally interested in the meal as livestock feed. Wickard points out that, properly mixed, one pound of peanut meal can provide a protein feed that will replace approximately four pounds of grain. With livestock goals (both for meat and for dairy products) at unprecedented levels, Wickard and his boys are exhausting every possibility in encouraging production of more feed.

• Bonus on Quota Basis-It is for this livestock feed as well as for the oil (needed for food on the home front and for lend-lease) that the Dept. of Agriculture is offering its bonus to peanut growers. Those who plant more than 90% of their Agricultural Adjustment Administration peanut acreage quotas to this crop will be allowed \$30 a ton on everything up to 110% of the quotas under terms of the incentive bonus. This is calculated to outweigh fears that costs such as labor might make over-quota production unprofitable.

Whether plantings come up to the 5,500,000-acre goal or not, more will be heard about peanuts this year-in the home, in the bleachers as usual, and

in industry besides.

PRODUCTION FACILITIES AVAILABLE...NOW!



are loaded with war orders have little or no conception of the amount of productive capacity available in thousands of small shops which cannot take war contracts direct.

You executives of big companies whose plants

My company, a small engineering and manu-CHARLES C. DOYLE facturing concern, has organized over 200 of President these shops into a War Production Pool to

handle subcontracts. This has been in operation since before Pearl Harbor, and has been credited with doing a good job for all concerned

We have made parts for aircraft, tanks, gun sights, landing gear and subassemblies for a number of important prime contractors. We have completed some contracts, and have constantly added new shops to our group, so we are in a position to handle quite a lot of new business.

Please don't get the mistaken idea that The J. E. Doyle Company is just a middleman. Our skilled engineering and production staff provides technical and supervisory assistance needed by most of these small shops. We do the "paper work." We see that they are provided with necessary tools, jigs and fixtures. We secure materials, handle inspections and deliveries. We take responsibility for results.

Our facilities are diverse and quite flexible. And we can move quick! A mosquito boat can't do a battleship's job, but it can move a lot faster. We're like a fleet of mosquito boats, and we want to use all we've got to help bring Victory quicker.

This may be the answer to your production bottleneck. We'll gladly furnish references.

Phone, wire or write today.

Charles C. Doyle

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While new Elliott Addressing Machines are limited to Government priority, good used Elliotts are available and can be secured by anyone without restriction.

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WM. E. HOOPER & SONS CO	WICKWIRE SPENCER STEEL CO

THE TRADING POST

Postwar Plans

During recent months it has become respectable for business management to resume its normal function of planning for the future. Close-up plans, of course, must be directed, as they have been for the last two years, toward winning the war. But more and more executives now find the time at least to think of postwar problems.

Postwar planning generally is of three types. One deals with the shaping of a national economy to meet postwar economic and social conditions. Too often this has been the exclusive field of those who aspire to "make America over" to the pattern of their dreams. Recently business men have begun to see the importance of taking a hand of their own in this job.

Another type of postwar planning considers industries as a whole. It involves the collective ability of each industry to plan its participation in the

postwar economy.

A third type deals with the affairs of the individual business. This is the most difficult of all because it must assume so much as to the shape of the postwar economy. Although many executives are anxious to undertake such planning, much of their thinking still is confined of necessity to the vaguest sort of speculation. On the other hand, some concerns may now be formulating plans and programs that are too set and rigid for adaptation to changes that may reasonably be expected before the time comes for their application.

Despite these limitations, some practical approaches to the subject recently have come to light. Here are a few.

The head of a firm that makes a power unit returned last month from a sixtyday trip covering his distributors and some of his big users.

He told them about the firm's laboratories, its research programs, and some of its progress during recent months of experimentation. This discussion permitted the manufacturer always to invite specific suggestions for improving

A more important purpose of his trip, however, was to convince his distributors of the factory's hunger for new ideas. "Never mind how wild the idea seems," he warned each one. "Never mind whether it results from a customer's kick or out of his speculating on what the ideal product would accomplish. We want all the suggestions. Let our laboratory decide whether or not they are practical. No one can tell without checking the idea against the total scientific knowledge in the field."

First finding of the trip surprised everyone at headquarters. The laboratory had been experimenting with the newer lightweight materials, despite misgivings as to any practical results. But users and distributors were found to be thinking about far more radical use of these materials. Now a new research project is bringing the laboratory's knowledge up to customers' expectations.

Another case. A manufacturer of power transmission equipment has geared his planning to a postwar economy in which-contrary to the thinking of many other industrialists and to the expectations of the potent Committee for Economic Development (BW-Jan. 2'43,p27)-he believes that the war burdens will inevitably breed poverty. In such a world, consumers would be able to buy fewer and cheaper products.

So he expects his present products to be rendered obsolete by economics rather than by technology, and his research engineers are concentrating on developing products that will perform at least as well as the best in his present line and yet cost far less. Permissible costs of postwar products he sets at 50% or 33½% of the 1942 scale. Even if his dismal forebodings about postwar markets should turn out to be over-pessimistic, he points out that products selling for half or one-third of present prices should be extremely useful against any predictable competition.

Another case. A large manufacturer with a widely diverse line of peacetime products ranging from automotive parts to household electrical merchandise, all sidetracked for the duration, has made designs of his postwar products a responsibility of the top management, working with everyone in the company who may be helpful.

As rapidly as a product is thus approved for postwar use, the problems to which it gives rise pass to other planners who rough out an idea of its production, costs, distribution and, with the assistance of an advertising agency, how it

should be advertised.

Because this planning has been continuous for more than a year, the management knows precisely what it would make and how it would undertake to sell this merchandise if the war should end very soon. But it recognizes that plans must be kept abreast of changing conditions, so each month the executives pull out of the files for review a sizable share of their postwar planning. Already many of these have undergone one or two revisions, and such re-revision will be frequent until the war ends and peacetime production can get underway.



• Here is industry's unbeatable pair of production drills—SKILDRILLS that you'll find preferred in aircraft, tank and war material plants everywhere. They're so light, so compact, so powerful they drive bits faster through wood, steel and compositions . . . shoot boles in drilling bottlenecks!

Lie SKILDPIL bendles

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1/4 in. SKILDRILL handles like pointing a finger—gets in anywhere a fist will fit—provides easiest top-speed, day-long drilling on stepped-up assembly lines! ½ in. SKILDRILL packs more power into less weight and space than any other drill made—punches more holes in less time even in closest quarters. It's no wonder SKILDRILLS are known as the outstanding values of the whole drill field.

Are there drilling jobs in 1/4 in. SKILDRILL handles

Are there drilling jobs in your plant that should be done faster? SKILDRILLS will do them faster. Ask your distributor to demonstrate.

SKILSAW, INC., CHICAGO Sold by leading distributors of hardware and industrial supplies



FLOOR SANDERS



THE TREND

TAXES-I. THEIR WARTIME JOB

In the course of the eight months of soul-searching that finally produced the 1942 revenue act, Congress discovered for the first time what a clumsy, creaking machine the country has for a tax system. Now, faced with President Roosevelt's demand for an additional \$16,000,000,000 in revenue, congressmen are beginning to realize that no amount of tinkering can make the present tax system do the job that has been assigned it. Nothing less than complete overhaul could really gear it to the problems of wartime economy.

As soon as the country began to shift to a war basis, taxation acquired a new purpose. It ceased to be merely a method of keeping the government in funds. It became one of our most powerful weapons in the campaign

to head off inflation.

• In peacetime, the object of taxation is to assess citizens with the cost of government as fairly and conveniently as possible. Modern tax theory usually identifies equity with a highly progressive rate structure that places most of the load on big incomes. But the effective deflationary tax is not always the convenient one which gives the highest yield. Nor is it always the one that falls on the top income brackets.

In writing the 1942 act, Congress couldn't get peacetime standards out of its head. It concentrated doggedly on scraping up money rather than on levying taxes where they would have the greatest deflationary effect. This explains why the last revenue bill contained the 3% tax on transportation (as inflationary a device as anyone could invent, since transportation can enter the cost of a commodity at half a dozen stages of manufacture, raising price and the processor's markup each time). It also explains why the present tax system raises 42% of its revenue from corporate taxes, which are at best only indirectly deflationary.

• Even as an old-fashioned revenue producer, the present tax law makes a poor showing in fairness and efficiency. Its estimated yield of \$35,407,000,000 in fiscal 1944 would represent only about 34% of federal expenditures. Moreover, raising the rates to record levels brought into sharp focus many defects that went unnoticed when the total

load was comparatively light.

Ten years ago, for example, it didn't matter a great deal if there was a year's lag between receipt of income and payment of the tax on it. Today, that system of "dead horse" collection is likely to ruin the man whose income falls off suddenly. Similarly, stockholders hardly felt the pinch of double taxation on their dividends in the days when corporate rates were low. Now, with corporation taxes of 40% in addition to the 90% excess profits tax, our trick of taxing income both as to the company and as to the individual slices away their return from both ends.

Congress will have to consider all these defects when it

takes up the President's request for \$16,000,000,000 more in tax yields, but even if it patches up some of the glaring weak spots, it won't solve the problem. Somewhere in its consideration of the next revenue act, Congress will have to come to grips with the basic problem of making our tax system an effective means of damping down inflation. That means Congress must decide whether or not it dares levy taxes that will reduce the country's standard of living—reduce it not only in the upper income brackets but also in all brackets.

No amount of wishful thinking can devise a deflationary tax that does not squeeze down living standards, because "deflationary" is simply a polite name for a tax that will cut consumers' income so much that it will reduce the demand for goods. By far the largest part of the country's buying power is concentrated in the income groups below \$5,000. In 1941, persons with incomes over \$5,000 received only \$14,600,000,000 of the \$90,000,000,000 total of individual incomes. Moreover, in the top brackets additional taxes reduce savings rather than consumption, which means that dollar for dollar they have less deflationary effect than taxes on low incomes.

• Before they can appraise the various proposals for wartime taxation, the country's taxmakers will have to make up their minds about the kind of fiscal policy they want. Controversial suggestions, like the sales tax, the spendings tax, forced savings, can be valued only in terms of their effect on buying power. To pass judgment, Congress and the Treasury must first decide just what it is they want to do to buying power.

And, then, if it does succeed in setting up a workable wartime program now, Congress must prepare to do a rush conversion job on taxes as soon as the war ends. For, when government spending stops powering the economy, we shall have to take the wraps off civilian buying power at once. Otherwise, the weight of taxes might topple us into a disastrous postwar slump.

• Furthermore, the longer Congress postpones a full dress tax reform the more trouble it is laying up for itself and the country. No matter when peace comes, government budgets will never get back to comfortable prewar levels. An annual outlay of \$20,000,000,000 isn't at all improbable for the postwar years. To impose a load like that without stifling economic activity, the tax system must work smoothly and fairly. It must be simple, definite, closely geared to ability to pay, with ample relief for hardship cases. Any man who makes out a return next Mar. 15 will testify that it is none of these now.

(This is the first of a series of Trends on the critical tax problems now confronting Congress and the nation. Others will appear in subsequent issues.)

The Editors of Business Week

